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ABSTRACT

This evaluation report is designed to provide a description and interpretation of the effects of local school programs supported by early childhood education (ECE) funds, funds provided under Title I of the Elementary and Secondary Education Act cf 1965 (ESEA Title I), and educationally disadvantaged youth (EDY) funds. Although these programs represent separate funding sources, their administration is designed to achieve a consistent process of systematic prcgram planning, implementation, and evaluation at the district and school levels. The report includes (1) descriptions of ECE, ESEA Title I, and EDY programs; (2) the methodology, instrumentation, and limitations of the various data-collection and data-analysis prccedures used in evaluating these programs; and (3) the findings cf the evaluations. The program descriptions include the goals, legislative authorizatien, scope, and eligibility criteria for each. The methodology sectien contains a description of the procedures that were followed and the instrumentation that was used. The findings sectien contains information about the numbers and types cf participants, expenditure patterns, indicators of institutional change, and student achievement results. Finally, a special section is devoted tc ESEA Title I specialized programs for distinct groups cf students administered by various California state agencies. (Author/JP)

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ED141460

Evaluation Report of ECE, ESEA Title I, and EDY

1975-76

UD017082

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I. Summary of Findings and Their Implications

The major findings of the *Evaluation Report of ECE, ESEA Title I, and EDY, 1975-76,* which are summarized below, are organized in this part as they appear in Part V of the report: enumeration data on participants in ECE, ESEA Title I, and EDY; institutional change; and student achievement. The implications of these findings for Department of Education action are reviewed briefly at the end of this summary.

Enumeration Data on Participants

An examination of the participant reports for early childhood education (ECE), Title I of the Elementary and Secondary Education Act (ESEA), and educationally disadvantaged youth (EDY) programs indicated the following:

- More than 939,000 students were served through the combined funding sources in 1975-76. Sixty-eight percent of these students were enrolled in kindergarten through grade three (ECE, ESEA Title I, and EDY); 23 percent were enrolled in grades four through six (ESEA Title I and EDY); and 9 percent were enrolled in grades seven through twelve (ESEA Title I and EDY).
- More students received services in reading and mathematics than in any other component. More than 883,500 students were served in reading, and more than 849,500 students were served in mathematics.
- More adult volunteers were involved in school programs than ever before. The 81,505 adult volunteers contributed nearly 351,000 hours per week of program assistance, an average of 4.3 hours per week per volunteer. Of these volunteers 76 percent (61,840 persons) participated in ECE schools, while 24 percent worked in schools with ESEA Title I and/or EDY programs only.

Institutional Change in Participating Schools

Evidence of institutional change in schools participating in the ECE reform effort and in ESEA Title I and/or EDY was gathered from the quality ratings of school-level plans, from quality reviews conducted during the monitor and review (MAR) school visitations, and from the special surveys of specific dimensions of institutional change. Institutional changes in participating schools were evident from the following findings:

- The plan-rating information indicated that all participating schools were engaged in systematic planning.
- The monitor and review (MAR) data indicated that:
  1. ECE schools were rated very high on implementation of their programs in accordance with their school plans (average rating 3.9 out of 5), especially in the areas of reading and mathematics instruction.
  2. Non-ECE schools that received only categorical resources were rated highest on implementation of their programs in accordance with their school plans (average rating 3.6 out of 5).
  3. ECE schools were rated high on their progress toward involving parents in all phases of the school program (average rating 3.6 out of 5).

Information gathered through the special surveys indicated that:

- Parents in the schools that were surveyed were satisfied with the performance of their children, with available school resources and materials, and with their role in the school program. They also believed that parent involvement had a beneficial effect on their children's attitudes toward school.
- Teachers in the schools that were surveyed felt that implementation of individualized instruction was taking place with relatively few constraints. Also, nearly 60 percent judged the recordkeeping as helpful in carrying out an individualized program.

These highlights, as well as other findings, strongly indicated that ECE schools were initiating and refining major changes in many of their programs. They indicated that ECE schools were effecting basic institutional changes in systematic program planning, implementation, and evaluation.

Three areas of institutional effectiveness appear to require increased emphasis in the coming year:

1. School-plan-rating data indicated the need for improved approaches to meet the needs of limited- and non-English-speaking students and the need for improved program planning in the area of language development.
2. The monitor and review data indicated the need for further emphasis on effective implementation of language development activities.
3. The monitor and review data also indicated the need for additional attention to methods of involving parents in program evaluation activities.

Student Achievement

District-reported data from standardized, nationally-normed tests indicated that:

- Students in schools with ECE funds only or ECE funds in combination with ESEA Title I and/or EDY funds attained reading achievement scores above the national average in all grades served. On the average, students in ECE-only schools exceeded the national average on post-tests of reading achievement by 2.9 to 3.8 standard score points.
- Students in ECE schools tended to have higher gain scores in reading and mathematics achievement than did students in schools with ESEA Title I and/or EDY programs only.
- Students in schools with ECE funds only or ECE funds in combination with ESEA Title I and/or EDY funds attained mathematics achievement scores above the national average in all grades served. On the average, students in ECE-only schools exceeded the national average on post-tests of mathematics achievement by 2.7 to 5.3 standard score points.
- Students in schools receiving only ESEA Title I and/or EDY funds demonstrated a consistent movement toward the national norm in reading and mathematics achievement in grades one through four.

California Assessment Program (CAP) data on reading achievement in grades two and three showed that:

- In schools receiving ECE funds only and schools receiving ECE funds in combination with ESEA Title I and/or EDY funds, students showed greater gains in reading achievement from 1974-75 to 1975-76 than students in a similar group of non-ECE schools showed.
- Students in ECE schools showed greater gains in residual reading achievement scores from grade two to grade three than did students in non-ECE schools.[1]
- Longitudinal declines in average residual reading achievement scores were noted in the group of ECE schools whose students scored in the lowest 20 percent on the CAP *Entry Level Test*. This finding suggests the need for more intensive analysis of all available data related to schools within this group, rigorous special surveys of student background and school factors that may be contributing to these declines, and other appropriate program improvement efforts to assist schools in improving students' reading performance.

Implications for Department of Education Action

As indicated throughout this report, the Department of Education is making every effort to improve the quality and usefulness of monitoring and evaluation information through continual refinement of procedures, instrumentation, and analytic techniques. Among the refinements anticipated for the 1976-77 consolidated evaluation report will be the following:

- A limited number of rigorous special surveys will focus on the student and school characteristics that affect reading achievement. These special surveys will address questions such as those raised in Part V about the performance of schools in the lowest 20 percent on the *Entry Level Test*.
- As noted in Part IV, numerical ratings of school plans have been discontinued in favor of specific feedback on the strengths and weaknesses of individual plans.
- Efforts to provide useful longitudinal data on the performance of schools and students will be continued.

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[1] A residual score is defined as the difference between a school's actual score (average score of its students) and its predicted score. Predicted scores are statistical estimates based on background characteristics of the school and its students.

- Efforts to enhance the usefulness of California Assessment Program (CAP) data in assessing student performance in schools receiving reform funds and categorical funds will be continued.

As in 1974-75, the Department encountered many problems in trying to assess the progress of limited- and non-English-speaking students. These problems were caused by a lack of appropriate testing instruments. Development of such instruments is continuing through a series of contracts with private research firms, but the instruments are not scheduled for completion until late in 1977. Thus, the same pretest and post-test performance assessment limitations will exist for the 1976-77 report.

In accordance with SB 1698/76, the 1976-77 evaluation report of ECE, ESEA Title I, and EDY will be expanded to include data on the Miller-Unruh reading program and data on the state program for limited- and non-English-speaking students.

II. Introduction to the Report

This *Evaluation Report of ECE, ESEA Title I, and EDY, 1975-76* is designed to provide a description and interpretation of the effects of local school programs supported by early childhood education (ECE) funds, funds provided under Title I of the Elementary and Secondary Education Act of 1965 (ESEA Title I), and educationally disadvantaged youth (EDY) funds in the 1975-76 school year. Although ECE, ESEA Title I, and EDY represent separate funding sources, their administration is designed to achieve a consistent process of systematic program planning, implementation, and evaluation at the district and school levels.

This comprehensive approach to program improvement reflects the cooperative efforts of the Legislature, the State Board of Education, and the Department of Education to develop an educational system that is designed to provide a quality educational program for all students in California. These efforts incorporate three dimensions: (1) the movement toward an equitable base level of school support that lessens the disparities in wealth among districts; (2) the recognition that various levels of support and assistance are required to meet the special needs of such students as the educationally disadvantaged, limited- and non-English-speaking, and physically and mentally exceptional; and (3) the provision of support and encouragement to ensure that funds and program improvement efforts to meet the unique educational needs of all students are coordinated through a planning, implementation, and evaluation process at each school site.

To encourage the coordination of these funding sources at the district level and at school sites, the Department, in accordance with Assembly Concurrent Resolution 127 of 1969, developed and implemented a consolidated application approach in 1973-74. For kindergarten through grade three, ECE provides the framework to enable school staff, parents, and representatives of the community at each school site to join together to plan, implement, and evaluate programs designed to promote educational improvement at that school. Thus, the consolidated application and ECE provide a joint process for managing resources to effect comprehensive program improvement for all students in kindergarten through grade three.

Consistent with the overall approach described above, this report not only presents information about the implementation of ECE, ESEA Title I, and EDY, but it also reflects the relationships between the comprehensive program improvement efforts of early childhood education and the various state and federal efforts directed toward the special needs of educationally disadvantaged students.

This evaluation report includes descriptions of ECE, ESEA Title I, and EDY; the methodology, instrumentation, and limitations of the various data-collection and data-analysis procedures; and the findings of the evaluation. Descriptions include the goals, legislative authorization, scope, and eligibility criteria for each funding source. The methodology section contains a description of the procedures that were followed and the instrumentation that was used. The findings section contains information about the numbers and types of participants, expenditure patterns, indicators of institutional change, and student achievement results. Finally, since some ESEA Title I funding administered directly by various state agencies was used to serve distinct groups of students in specialized programs, a separate section is devoted to those programs.

In addition to this report, a separate appendix containing an exhaustive compilation of all the source data is available from the Department of Education.

III. Program Description

Part III of the evaluation report gives the reader a background against which to examine the effects of school programs supported by ECE, ESEA Title I, and EDY. It also provides an overview of the goals, legislative authorizations, scope, and eligibility criteria for each funding source.

Early Childhood Education

Early childhood education (ECE) was enacted by Chapter 1147, Statutes of 1972. This legislation established a process to reform and, where necessary, restructure primary education in California to ensure that all students in kindergarten through grade three would receive an education that would meet their unique needs, talents, interests, and abilities.

To achieve this goal, ECE calls for a comprehensive process at each elementary school site to assess the needs of the students, develop appropriate educational strategies, evaluate the results, and make any subsequent changes that may be necessary. Each of these steps is to involve the joint efforts of parents, teachers, administrators, other school staff, and members of the community. Although the areas of emphasis and the approaches to program improvement are necessarily different at each school, these six major strategies are emphasized in every ECE school:

1. Individualization of instruction to meet each child's capabilities and needs, with ongoing attention given to the child's progress
2. Organization of the learning experiences to allow each child to make continuous progress at his or her own rate and to develop positive attitudes and feelings of self-worth
3. Reduction of the child-to-adult ratio to not more than 10 to 1 through the use of parent volunteers, aides, and tutors
4. Provision of support programs, such as parent education, health/auxiliary services, and staff development
5. Development of active school-parent community partnerships through cooperative program planning and implementation efforts
6. Development of a school site evaluation to be used for refining program plans and implementation activities

The goal of ECE is to incorporate the strategies described above as a means of improving local instructional programs and establishing accountability at each participating school. As a comprehensive restructuring process aimed at all students in kindergarten through grade three within a participating school, ECE is not designed to be a categorical program; that is, it is not designed to provide supplementary resources to improve the performance of identified groups of students with special needs. Instead, ECE is designed to provide the framework and resources for designing school programs that will meet the needs of all students in that school.

Scope of ECE

Chapter 1147, Statutes of 1972, provided for an appropriation of $25 million in 1973-74 and $40 million in 1974-75 for support of ECE. Since 1974-75 ECE has been expanded annually through funds provided in the state budget. As is shown in Table III-1, the 1975-76 state budget provided for $63.2 million for the support of ECE. These funds extended the ECE effort to approximately one-third of California's student population in kindergarten through grade three. Table III-1 also reflects the expansion of ECE from school year 1974-75 through the 1976-77 school year.

ECE Funding and Eligibility Criteria

Upon State Board of Education approval of a school's proposed program, ECE funds were allocated in 1975-76 on the basis of $140 per student enrolled in kindergarten through grade three. An additional $70 was allocated for each student who

scored at or below the 25th percentile of national norms in reading or mathematics achievement.

Each year half of the ECE funds for any participating district must be used at those schools that have the greatest "educational need." The measure of educational need is the percent or number of students scoring at or below the 25th percentile on standardized, nationally normed reading or mathematics achievement tests. The other half of the ECE funds may be used for any combination of schools that the district selects, since all schools are eligible for funding.

TABLE III-1

Number of K-3 Students Served by ECE and Funds Appropriated, 1974-75 Through 1976-77

Year	Number of K-3 students served	Percent of K-3 students statewide	Funds appropriated
1974-75	303,131	24.5	$40,000,000
1975-76	426,747	34	63,200,000
1976-77	676,000 (estimated)	55 (estimated)	97,450,000

The annual expansion of ECE to additional schools is based on the availability of new state funds and the quality of programs implemented at ECE schools in each participating district. As a result, in any given year expansion rates vary from district to district, with some districts receiving no expansion funds at all.

ESEA Title I

In enacting Title I of the Elementary and Secondary Education Act (ESEA) of 1965 (PL 89-10, as amended), the United States Congress provided financial assistance for the augmentation of educational programs for students from low-income families. Pursuant to federal statutes the Department of Education allocates and monitors grants of money to local educational agencies qualifying for ESEA Title I funds.

Scope of ESEA Title I

Table III-2 displays the number of students served by ESEA Title I and the funds appropriated from 1974-75 through 1976-77.

ESEA Title I Funding and Eligibility Criteria

ESEA Title I funds are granted to California on the basis of the eligibility of each county. Funds are then allocated to school districts in accordance with a formula based on data from the Aid to Families with Dependent Children (AFDC) program. The formula is shown in Appendix A. Districts then allocate funds to target schools on the basis of relative educational need.

Once ESEA Title I funds are allocated to a school, students are selected for participation on the basis of their educational need, which is defined to include students scoring at or below the second quartile on standardized achievement tests or those who have serious learning deficiencies because of linguistic, social, cultural, or economic isolation.

In their use of ESEA Title I funds, districts must provide services to participating students over and above the services that they provide to nonparticipating students. While ESEA Title I funds may be used for students in preschool and in kindergarten through grade twelve, state regulations require that these monies be "focused" first on students in the early school grades to make the greatest impact early in a child's education.

TABLE III-2

Number of Students Served by ESEA Title I and Funds Appropriated, 1974-75 Through 1976-77

Year	Number of students served (all grade levels)	Funds appropriated*
1974-75	503,416**	$132,577,018
1975-76	529,845	130,039,420
1976-77	550,000 (estimated)	139,880,257

*All figures in this column represent amounts appropriated to local educational agencies (LEAs). These amounts do not include funds allocated for migrant education, handicapped children, neglected and delinquent children or other purposes because the counts of participants are limited to students receiving funds granted to LEAs.

**In the *Evaluation Report of ECE, ESEA Title I, and EDY, 1974-75*, the number of Title I participants reported (591,561) represented a count of all students in schools that received Title I funds. For fiscal year 1975-76 the summary count reflects the actual number of students who participated in Title I programs. So that the figures shown are comparable, the number of students served by Title I in fiscal year 1974-75 has been restated to reflect the actual number of students who participated in Title I programs.

Other special categories of students who are eligible to receive services under ESEA Title I include handicapped students living in state institutions, American Indian and migrant students,

students in state institutions for the neglected or delinquent, and students attending nonpublic schools if they live in an eligible attendance area and are educationally deprived.

Educationally Disadvantaged Youth

The state-funded program for educationally disadvantaged youth (EDY) is designed to provide quality educational opportunities for students, as authorized by Chapter 1406, Statutes of 1972 (SB 90).

The goals, target population, and requirements of EDY are similar to those of ESEA Title I.

Scope of EDY

Table III-3 displays the number of students served by EDY and the funds appropriated from 1974-75 through 1976-77.

Funding and Eligibility Criteria

Educationally disadvantaged youth (EDY) funds are allocated to school districts in accordance with a formula that includes indexes of limited-English-speaking ability, transiency, and poverty. The formula is given in Appendix B.

Once district eligibility for EDY funding is established, districts select those school attendance areas that include the students with the greatest educational need. Need is determined by either the number or percent of students scoring below the 25th percentile on standardized achievement tests in reading or mathematics; however, even though the focus of attention is on students achieving at levels below the 25th percentile, all students achieving below the 50th percentile are served. Under provisions of the Educationally Disadvantaged Youth Act, EDY funds are used to serve only those students enrolled in public education programs. Regulations established by the State Board of Education require that priority be given to serving students in the early grades.

TABLE III-3

Number of Students Served by EDY and Funds Appropriated, 1974-75 Through 1976-77

Year	Number of students served (all grade levels)	Funds appropriated
1974-75	389,513*	$83,754,000
1975-76	400,754	90,389,376
1976-77	443,000 (estimated)	97,554,936

*In the *Evaluation Report of ECE, ESEA Title I, and EDY, 1974-75*, the number of EDY participants reported (436,009) represented a count of all students in schools that received EDY funds. For fiscal year 1975-76 the summary count reflects the actual number of students who participated in EDY programs. So that the figures shown are comparable, the number of students served by EDY in fiscal year 1974-75 has been restated to reflect the actual number of students who participated in EDY programs.

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IV. Procedures, Instrumentation, and Limitations

An examination of the effects of ECE, ESEA Title I, and EDY focused on three primary areas:

- Enumeration data describing the scope of school programs provided through the three funding sources
- Institutional change indicators that describe the impact of school restructuring efforts on the context in which the student achieves
- Indicators of student achievement in reading and mathematics

Conclusions based on a review of enumeration data alone, of the institutional change data alone, or of student achievement data alone could be significantly misleading. Thus, this report is based on a series of measurements or examinations of the areas described above. The evaluation is, therefore, a collection of separate evaluations, which together provide a picture of the effects of ECE, ESEA Title I, and EDY.

Several specific data sources were used in the evaluation of programs that received ECE, ESEA Title I, or EDY funds. While part of the information was used to determine participant eligibility, another part was used for school-, district-, and state-level planning and evaluation. Chart IV-1 shows the various data sources that were used in the evaluation of programs. These data sources are described in terms of (1) the funding sources that were involved at the local educational agency; (2) the name of the instrument that was used to gather the data; (3) the agency that completed the instrument; and (4) a general description of the instrument's contents.

Enumeration Data on Participants

Through the year-end "Product Evaluation Report," all participating schools were asked to provide information relative to the numbers of participants who received services provided under each funding source, the numbers of volunteers involved in their programs, and the numbers of personnel hired through the various funding sources. Self-reporting of enumeration data has proved quite accurate and useful in describing the scope of school programs.

Assessment of Institutional Change

As noted earlier, a major goal of the ECE restructuring effort is to improve the educational delivery system and thereby increase student achievement in basic skills. In most cases such improvement requires institutional changes that affect the goals, roles, and environment of participating districts, schools, staffs, and communities.

Designing instruments and procedures to assess precisely the nature and degree of institutional change within and across thousands of schools statewide is a difficult task. In the first place, the development of measuring instruments for this purpose involves a relatively new technology. Secondly, when assessment procedures are of necessity combined with field services and program improvement efforts, the assessment of institutional change may be somewhat confounded by the companion efforts to improve programs.

The Department of Education has been using three methods to examine the nature and extent of institutional change: (1) quality reviews of school program plans; (2) on-site program quality reviews for schools entering ECE in 1975-76 and continuing ECE schools with the lowest overall ratings and compliance and quality reviews for schools funded by ESEA Title I and EDY only; and (3) special surveys of particular aspects of institutional change.

The quality review of school program plans and the on-site monitor and review process have several major purposes. They are intended to provide systematic feedback to a school about its program planning, implementation, and evaluation. This feedback is designed to aid in future program development by encouraging ongoing planning, internal monitor and review, and process and product evaluation.

CHART IV-1

Data Sources Used in the Evaluation of ECE, ESEA Title I, and EDY Programs, 1975-76

Local educational agencies investigated	Instrument(s) used to gather data	Agency completing instrument	Description of instrument's contents
Districts with ECE, ESEA Title I, or EDY funding	Form A-127D	District office	District-level allocation plans, application for funding
Elementary and secondary schools with ECE, ESEA Title I, or EDY funding	Form A-127ES Form A-127Sec (school level plan)	Schools	School level plans: review of needs assessment process, objectives, activities, evaluation, dissemination, and budget
Elementary schools with ECE and/or ESEA Title I/EDY funding	School-level plan rating instrument	State Department of Education	Rating of school-level plans
Selected ECE, ESEA Title I, and EDY schools	Program Quality Review Instrument (monitor and review)	State Department of Education	On-site review and rating of programs' implementation
Selected ECE schools	California Assessment Program *Reading Test:* second and third grades	Schools	State testing instrument used to assess reading achievement at the end of grades one and two
Elementary and secondary schools with ECE, ESEA Title I, or EDY funding	Phase I, evaluation report (Form E-127P)	Schools	Evaluation report: enumeration of pupils, program personnel, and volunteers; pupil achievement on standardized tests (pretest and post-test); and self-reports on activities implemented and objectives accomplished
Stratified random sample of schools with ECE, ESEA Title I, or EDY funding	Phase II, special studies	Schools	Survey instrument report in one of the following: secondary schools, adults in the classroom, parent involvement, decision making, achievement reporting, staff development, individualization of instruction, school advisory committees, multicultural programs, and state preschool
Districts with ECE, ESEA Title I, or EDY funding	Form CARM 10	District office	Financial report for each program: ECE, ESEA Title I, and EDY

Quality Review of School-Level Plans

The quality review of school-level plans is important for two reasons: (1) it produces valuable data; and (2) it encourages the use of a comprehensive planning process at the school site. At the beginning of the process, the school community prepares a comprehensive program plan. This plan is submitted to the Department of Education, which carefully reviews it. The quality reviews are then sent to the schools to help those who prepared them understand weaknesses in the original program design.

During the spring of 1975, each school applying for ECE, ESEA Title I, or EDY funds developed a school-level plan. All schools that were applying for ECE funds submitted their plans to the Department of Education prior to July 1, 1975.

The Department's rating of plans covered several aspects of program planning, including the needs assessment process, which included identification of existing conditions and desired conditions; the program description, which included specification of objectives; evaluation and dissemination; and program budgeting. The rating of the plans provided a measure of the ways in which systematic planning could be put on paper. The rating was not, however, a rating of the schools' ability to implement their plans.

Program Quality Review and Program Compliance Review

The purpose of monitor and review (MAR) visits is to conduct school-level compliance reviews and quality assessments of program implementation. These reviews and assessments serve two major purposes. First, they provide participating schools with a program quality assessment that can be used by the schools in their program improvement efforts. Second, they provide state-level information on compliance with the legal requirements of each funding source and information on the overall quality of the implementation of school plans and programs.

In program year 1975-76 the Department of Education conducted monitor and review (MAR) visitations to schools that were receiving ECE, ESEA Title I, and/or EDY funds. At the time that this report was compiled, 951 school MAR records were on file.

MAR teams of at least two persons visited all schools during the period from November 1, 1975, through May 31, 1976. The teams spent two days in schools with 14 or more participating classrooms. Smaller schools were reviewed in one day. The visiting team consisted of either a Department of Education employee or other experienced individual, who acted as the lead person, and a backup person, who was, in most instances, either an employee of the Department, a district staff member, or a staff member of an office of the county superintendent of schools. In some cases instructors from various California colleges and universities acted as backup persons or observers.

The MAR teams used two forms for each school review: the "Program Quality Review Instrument" (PQRI), and the "School Level Program Compliance Review Instrument" (compliance document). A third form was used to review district office compliance with the regulations governing the various programs. This form, the "District Level Program Compliance Review Instrument," was used by both the elementary and secondary staffs in their district audits.

Part IV of this report includes a description of the MAR "Program Quality Review Instrument" (PQRI), the statistics from the various sections of the PQRI, correlational analyses, and inter-rater reliability data. A copy of the PQRI is included in Appendix C.

Special Surveys

The Department conducted special surveys to examine the nature and extent of institutional change at a level beyond that indicated by the aggregate, statewide school-level planning and monitor and review data.

The topic areas for the special surveys, which are listed in Table IV-1, were based, in part, on program components required by ECE, ESEA Title I, and EDY. In addition to the component referents, however, the surveys also attempted to address institutional change questions and issues raised by the program and program evaluation staffs as well as questions arising from a search of the literature on the nature of change in educational institutions.

The Department conducted 11 special surveys during 1975-76. Findings from six of the special surveys were sufficiently complete to include in this report. Summaries of those findings can be found in Part V. Technical reports on the findings of the remaining five surveys will be available at a later date.

For each special survey a scientific procedure was used to ensure that the sample was representative of ECE, ESEA Title I, and EDY schools. The two exceptions to this sampling procedure were that: (1) the secondary schools survey included all

secondary schools with ESEA Title I or EDY funding; and (2) the multicultural education survey was based on a sample of schools that were selected on the basis of the racial-ethnic distribution of students and the rural-urban characteristics of the community.

Questionnaires were used for eight of the surveys, and field observation techniques were used for three. The instrumentation or procedures that were used and the sample size for each survey are shown in Table IV-1.

The percent of return for the survey questionnaires varied from a low of 56 percent to a high of 92 percent, with a median return rate of 71 percent. Information about the distribution and return of the questionnaires is summarized in Appendix D.

TABLE IV-1

Summary of Instrumentation and Procedures in the Special Surveys

Survey	Number of schools in the sample	Instrumentation or procedure
Questionnaires		
Achievement reporting	143	Achievement reporting survey
Adults in the classroom	69	Classroom teacher survey Paraprofessional survey
Decision-making styles	93	Principal opinion survey Teacher opinion survey Parent opinion survey
Individualization of instruction	249	Language program survey Reading program survey Mathematics program survey
Parent involvement	74	Staff opinion survey Parent opinion survey
School advisory committees	220	School advisory committee chairperson survey School advisory committee member survey
Secondary schools	135	Teacher survey Administrator survey
Staff development	181	Staff development survey
Field observations		
Day in the life of a typical student	11	Observations by Office of Program Evaluation and Research staff member
Multicultural education	23	Observations by Bureau of Intergroup Relations professional staff members
Planning	15	Observations by Office of Program Evaluation and Research staff member

Assessment of Student Achievement

The principal question in assessing the effects of school programs on student achievement is: How well did the students perform compared to how they would have performed had they not participated in school programs supported by ECE, ESEA Title I, and EDY? Unfortunately, this question cannot be answered directly because districts, schools, and students are selected for participation in ECE, ESEA Title I, and EDY in accordance with prescribed criteria for eligibility. The effect of these selection procedures is that program participants differ from nonparticipants in terms of not only the criteria for eligibility that they meet but also in terms of a myriad of other variables related to school background and student population. Consequently, evaluators have developed techniques that provide indirect evidence from which inferences can be made about program effects. In this evaluation report inferences have been made on the basis of two types of comparisons: those between program participants and publishers' national norm groups; and those among ECE schools and between ECE schools and non-ECE schools on the basis of California Assessment Program (CAP) data.

Standardized Achievement Test Data

The data that are presented in the areas of student achievement are from objective, standardized, norm-referenced achievement tests, the results of which were reported to the Department through the year-end "Product Evaluation Report." These tests are relatively insensitive to specific instructional programs; that is, they measure general objectives quite well but measure specific objectives poorly or only by inference. The instructional activities in any given program frequently stressed specific objectives and, hence, their effectiveness could not be measured adequately with standardized, norm-referenced tests. In such cases the use of standardized, norm-referenced tests tended to result in underestimates of the actual instructional gains made by the students toward the specific program objective. The use by schools of a variety of instruments to test participants compounded the problem. The Department of Education was constrained, however, to use standardized, norm-referenced tests, since such tests made comparisons among groups possible. The problem of measuring and comparing the progress of schools—each with its own unique set of objectives—was alleviated only partly by allowing schools to choose a particular commercially developed standardized achievement test for use in the evaluation.

In some respects the use of instruments specifically designed to measure the acquisition of specific skills would be a better practice. To the extent that programs are unique and meet the unique needs of a variety of students, however, the results would be expressed as an unmanageable number of unrelated specific scores. To aggregate such scores to represent the performance of groups of students would be impossible. Within these limitations standardized, norm-referenced tests are generally the best available aggregable indicators of students' academic progress.

Schools were required to administer standardized, norm-referenced achievement tests in reading and mathematics on a pretest and post-test basis. The achievement tests that were used, reported by frequency of use, are listed in Appendix E. Typically, pretesting was conducted in October, 1975; and post-testing was conducted in May, 1976. The frequency distribution of elapsed time between pretesting and post-testing for schools is shown in Appendix F.

Publisher's national norms for achievement test scores represent the achievement level of the average student in the nation. A comparison of participant scores with publishers' national norms is useful in that it indicates how participants are scoring relative to a national sample of students at the same grade level.

While test scores have often been expressed in grade equivalents, many technical shortcomings exist in the use of this particular type of derived score. A technical discussion of the shortcomings of grade equivalent scores can be found in Horst, Tallmadge, and Wood.[1] Given these shortcomings, the Department has reported student achievement using standard scores based on a national mean score of 50 and a standard deviation of 10. These standard scores were computed from mean raw scores when in-level testing was conducted and from mean scale scores when out-of-level testing was used. The standard scores were computed as follows:

$$T = 50 + \left(\frac{X - \bar{X}}{SD}\right)10$$

where T = standard score
X = school mean score
$\bar{X}$ = publisher's mean score
SD = publisher's standard deviation

[1] D. Horst, G. K. Tallmadge, and C. Wood, *Measuring Achievement Gains in Educational Projects* (RMC Report UR-243). Los Altos, Calif.: RMC Corporation, October, 1974, pp. 9 and 10.

Conversion of the data to standard scores facilitated interpretation of the findings in relation to national norms. Assume, for example, that students had an average standard score of 48 on the pretest. If the students' average post-test score was also 48, they would have maintained their same position relative to the national norm group. In other words, the students would have made the same gain that the norm group made. To the extent that the post-test score was greater than the pretest score, the students could be considered to have gained more than the norm group.

In the computation of achievement gains, scores were used for only those students for whom both pretest and post-test scores were available. Test information that was either incomplete or based on procedural irregularities was not used in developing statewide averages. Examples of incomplete data and irregular procedures included instances in which (1) either pretest or post-test information was omitted; (2) test results were combined for several grade levels; (3) test scores were not reported in terms of either raw scores or scale scores; (4) tests without national norms were used; (5) the elapsed time between the pretest and post-test was less than five months; and (6) no test results were reported. A substantial quantity of usable data from grade one was lost due to the unavailability of fall norms.

The Department recognized that gain scores on standardized achievement tests may be influenced by both the relative time of pretesting and by the amount of elapsed time between pretesting and post-testing. The Department controlled as much as possible for this effect by eliminating scores with inappropriate intervals between the pretest and post-test. Test data are reported, by time of testing, in Appendix G.

California Assessment Program Data

Comparisons were also conducted on the basis of data provided by the California Assessment Program (CAP). Analyses of trends in reading scores and an examination of the relationship between reading achievement and socioeconomic and demographic variables were conducted for ECE schools and for a matched group of non-ECE schools. This longitudinal study of reading achievement performance of ECE schools was provided by data obtained by multiple regression analyses of all schools in California. California Assessment Program data for grades two and three for the years 1972-73 through 1975-76 were used. The school served as the unit of analysis; and the regression variables included grade one *Entry Level Test* scores from the California Assessment Program, socioeconomic index, percent of bilingual students, and student mobility rate. As a result of the analyses, it was possible to observe changes in reading test scores among ECE schools relative to changes in student populations and length of program participation.

V. Findings

This part of the evaluation report contains findings regarding (1) participants and expenditures in ECE, ESEA Title I, and EDY; (2) institutional change; and (3) student achievement.

Enumeration Data on Participants

Enumeration data are provided on student participants, volunteer participants, and expenditures for ECE, ESEA Title I, and EDY.

Student Participants

A total of 939,389 students in kindergarten through grade twelve participated in school programs supported by ECE, ESEA Title I, and EDY in 1975-76. The number of student participants, by grade level, is shown in Figure V-1.

Of the total participants approximately 68 percent were enrolled in kindergarten through grade three; 23 percent were enrolled in grades

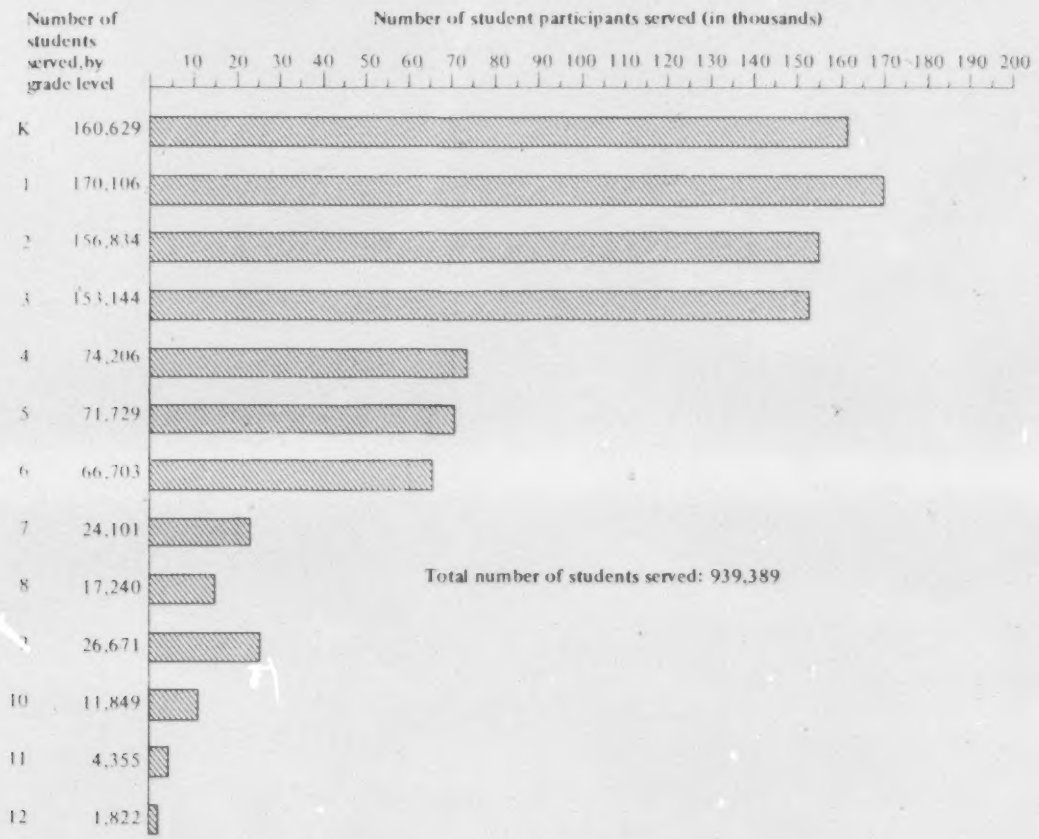


Fig. V-1 Number of student participants in ECE, ESEA Title I, and EDY, by grade level, 1975-76

four through six; and about 9 percent were enrolled in grades seven through twelve. The number of students served during 1975-76, by funding source and grade level, is included in Appendix H.

Of the students served in all programs, more received services in reading and mathematics than in any other instructional component. More than 883,500 students were served in reading components, and more than 849,500 were served in mathematics components. The numbers of participants involved in a majority of the activities in other components are presented in Appendix I. Participants who were involved in more than one component were counted for each component in which they participated (duplicated count).

ECE participants. School-level reports indicated that 426,747 students participated in ECE-funded programs during 1975-76: 113,009 in kindergarten; 110,352 in grade one; 102,188 in grade two; and 101,198 in grade three. During the years 1973-74 through 1975-76, the percent of kindergarten through grade three students statewide who participated in ECE increased steadily. The percent of kindergarten through grade three students statewide who participated in ECE, by year, is shown in Table V-1.

ESEA Title I participants. During the 1975-76 school year, 529,845 students from preschool through grade twelve participated in ESEA Title I programs.[1] Of the total number of students served, 508,672, or 96 percent, were enrolled in public schools. Detailed enrollment data are presented in appendixes J and K. Consistent with state policy, the greatest concentration of participants was in the primary grades, where 53.4 percent of the participants were served in kindergarten through grade three and 33.8 percent were served in grades four through six. Of all student participants 12.3 percent were served in grades seven through twelve. Table V-2 shows the distribution, by grade level, of students in California who received ESEA Title I services from 1967-68 through 1975-76.

TABLE V-1

Percent of Students Statewide Participating in ECE Programs, 1973-74 Through 1975-76

Grade level	Percent of ECE enrollment, by school year		
	1973-74	1974-75	1975-76
Kindergarten	17.2	25.3	34.4
One	16.6	25.5	33.9
Two	11.4	23.9	33.6
Three	9.9	23.1	33.6
Total enrollment	13.8	24.5	34.0

[1] In the consolidated evaluation summary report for fiscal year 1974-75, the number of Title I participants reported (591,561) represented a count of all students in schools that received ESEA Title I funds. In this report the summary count reflects the actual number of students who participated in Title I programs.

EDY participants. During the 1975-76 school year, 400,754 students, from preschool through grade twelve, participated in programs funded by EDY or by EDY in combination with other funding sources.[2] Of all students served, 51.7 percent were enrolled in kindergarten through grade three; 34.9 percent were enrolled in grades four through six; and the remaining 13.4 percent were enrolled in grades seven through twelve. The number of EDY participants, by grade level, is shown in Appendix L.

Volunteer Participants

Nearly 351,000 hours per week of program assistance were donated by 81,505 adult volunteers during 1975-76. The average number of hours of assistance per week per volunteer was 4.3. The majority of volunteers, 61,944, or 76 percent, participated in ECE-funded programs or in programs that were funded by ECE in combination with ESEA Title I and/or EDY. A total of 19,561, or 24 percent, participated in other multifunded programs.

Expenditures

In 1975-76 a combined total of $282,184,320 in ECE, ESEA Title I, and EDY funds was allocated to local educational agencies. The allocations, expenditures, and carry-over funds for each of the three major funding sources under the consolidated application process were to be reported in a special expenditure report at the end of the 1975-76 program year. Although the audit of the reports filed for each funding source was not complete at the time this report was written, it was possible to select for evaluation a random sample of reports

[2] In the consolidated evaluation summary report for fiscal year 1974-75, the number of EDY participants reported (436,009) represented a count of all students in schools that received EDY funds. In this report the summary count reflects the actual number of students who participated in EDY programs.

from ECE, ESEA Title I, and EDY schools. Each district reported a summary of the total amounts expended for all of its schools that received ECE, ESEA Title I, and/or EDY funds. Figures V-2 through V-7 show the percents of funds expended in various budget categories and for various categories of personnel in the districts that were sampled. However, since these figures were based on a sample of the reports that were returned, the reader should use caution in interpreting them.[3] All school reports are being reviewed as final budget figures are submitted, and these percents will be computed for all participating schools.

Since a variety of funding sources often "interact" within a school, expenditure patterns in such schools may reflect decisions about only which "source" to use to provide specific parts of a multifunded, supplementary school program. Furthermore, the funds in all cases must supplement, not supplant, base program funding.

ECE expenditures. ECE provided $61,894,358 to 1,709 elementary schools during 1975-76. Of the total, $44,512,835 was provided to 1,336 continuing ECE schools, and $17,381,523 was provided for new programs at 457 expansion school sites.

As is shown in Figure V-2, of the ECE funds expended by schools, 45 percent was spent on salaries for classified staff (e.g., teacher aides) to lower the student-to-adult ratio in the classroom. By contrast, certificated (e.g., teachers and other professional staff) salaries, employee benefits, and books and materials each represented a smaller proportion of ECE expenditures.

The relative percents of additional school personnel, by category, employed with ECE funds are presented in Figure V-3.

ESEA Title I expenditures. In 1975-76, as shown in Table V-3, more than $156 million was allocated to the state by the federal government for disbursement to state and local agencies. Of the total approximately $130 million was distributed to 1,998 public schools throughout California as grants to local educational agencies.

ESEA Title I expenditures, by budget category, are shown in Figure V-4. A comparison of ECE expenditures and ESEA Title I expenditures showed that a substantially higher percent of ESEA Title I funds was used for teacher and supervisory salaries and that a lower percent of ESEA Title I funds was used for the salaries of classified personnel.

The relative percents of additional school personnel, by category, employed with ESEA Title I funds are presented in Figure V-5. Aides represented the largest single category of personnel employed in ESEA Title I programs.

EDY expenditures. During 1975-76 a total of $90,389,376 in EDY funds was distributed to 1,291 public schools in California.

[3]The sample included unaudited reports of 31 district and 12 cooperative summaries of ECE expenditures, 26 district summaries of ESEA Title I expenditures, and 31 district and 7 cooperative summaries of EDY expenditures in 1975-76.

TABLE V-2

Percent of Students Receiving ESEA Title I Services in California, by Grade Level Groups, 1967-68 Through 1975-76

Grade level	Percent of total ESEA Title I enrollment, by school year								
	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76
Kindergarten through grade three	40.4	41.8	50.4	52.1	51.9	54.0	56.5	54.3	53.4
Grades four through six	22.8	23.7	33.0	33.9	34.7	35.3	30.3	34.0	33.8
Grades seven through nine	19.9	20.7	8.9	9.1	8.2	6.6	8.4	8.3	9.4
Grades ten through twelve	12.4	10.9	4.0	3.6	3.3	2.7	3.7	2.6	2.9

NOTE: Figures for participants in preschool and ungraded programs are not included in this table; therefore, the values in the respective columns do not total 100 percent.

Expenditures among sampled EDY programs, as shown in Figure V-6, indicated that—unlike for ECE and ESEA Title I—the majority of program funds were expended on certificated staff rather than on classified staff.

A comparison of budget categories of EDY funds and percent of personnel funded by EDY, shown in Figure V-7, indicated that, although aides and other support staff represented 70 percent of the additional personnel employed with EDY funds, only 17 percent of the funds allocated to schools were used for payment of their salaries.

Institutional Change

As was noted earlier, ECE provides a process through which schools take a comprehensive approach to their program planning, implementation, and evaluation. The changes in these program aspects or processes collectively define the institutional change that occurs at a school. The impact of institutional change was generally evaluated in terms of ratings of school-level plans and the ratings derived from the monitor and review (MAR) process. In addition, various special surveys were conducted to review specific aspects of school programs.

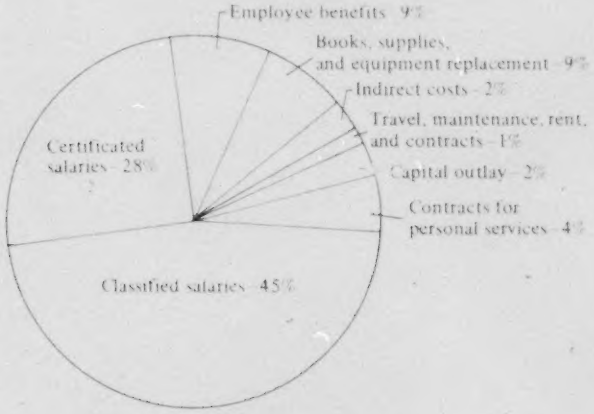


Fig. V-2. Budget categories of ECE funds, by percent of expenditure, from a random sample of unaudited reports of 31 district and 12 cooperative summaries, 1975-76

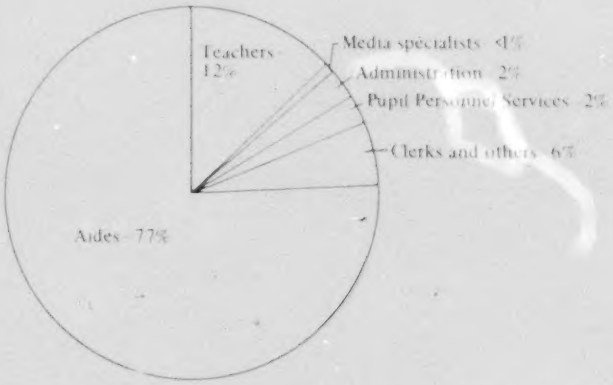


Fig. V-3. Percent of personnel funded by ECE projects, 1975-76

TABLE V-3

Educational Agencies Receiving ESEA Title I Project Grants in California, 1975-76

Agency	Grant award amount	Percent of total
Local educational agencies	$130,039,420	83.1
State educational agencies		
Migrant education	18,509,670	11.8
Neglected and delinquent	2,489,471	1.6
Handicapped children	1,013,010	0.6
California State Department of Health	1,346,508	0.9
California Youth Authority	1,448,082	0.9
California State Department of Corrections	183,421	0.1
State administration	1,526,166	1.0
Total	$156,555,748	100.0

School-Level Planning

Schools that received funds through the consolidated application were required to complete a systematic planning process for each of the following program components:

- Language development
- Reading
- Mathematics
- Multicultural education
- Staff development
- Parent participation
- Parent education
- Health/auxiliary services

A major institutional change finding concerning school program planning was that all 3,220 schools that received ECE, ESEA Title I, or EDY funding prepared and submitted comprehensive program plans for 1975-76. For the great majority of these schools, this annual planning process was implemented through the state reform efforts.

Of the 3,220 school plans that were submitted, 1,899 were updates of existing plans, including those from ECE schools from previous years; and 1,321 were from schools new to the consolidated application process or from existing ECE schools that were required to submit rewritten program plans. The Department conducted detailed quality

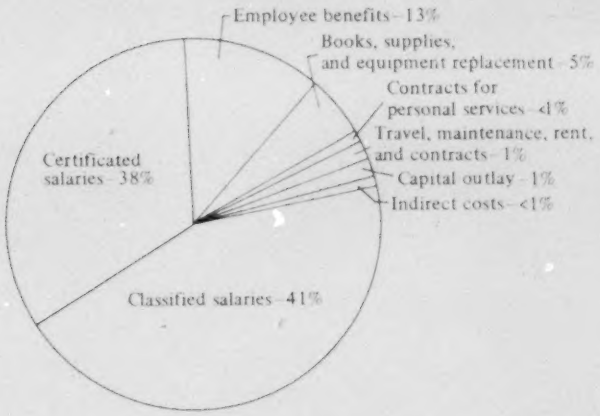


Fig. V-4. Budget categories of ESEA Title I funds, by percent of expenditure, from a random sample of unaudited reports of 26 district summaries, 1975-76

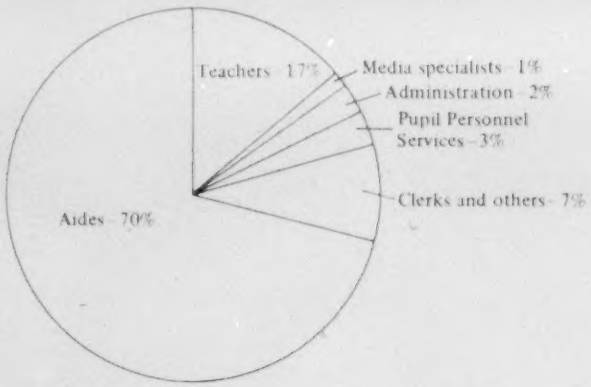


Fig. V-5. Percent of personnel funded by ESEA Title I projects, 1975-76

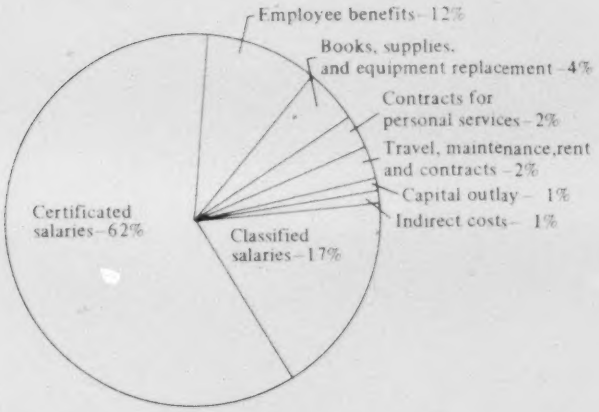


Fig. V-6. Budget categories of EDY funds, by percent of expenditure, from a random sample of unaudited reports of 31 district and seven cooperative summaries, 1975-76

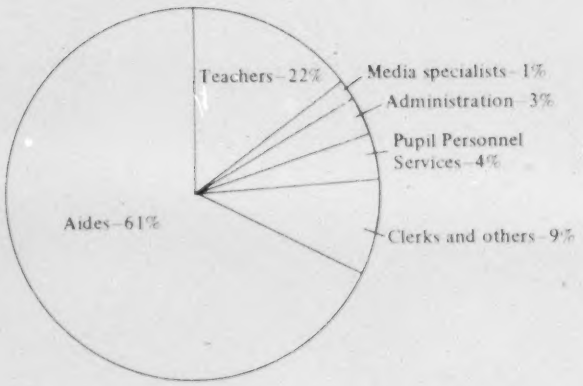


Fig. V-7. Percent of personnel funded by EDY projects, 1975-76

ratings of plans of only the 1,321 schools that submitted new or fully rewritten plans. The remaining plans were reviewed for compliance with applicable legal requirements.

The quality of school plans naturally varied. The review of school plans enabled the Department to make some judgments related to the clarity and consistency of the plans and the extent to which solution procedures would meet the needs described by the school.

The instrument that was used to rate plans incorporated a 0–5 scale for each of ten items that were applicable to the eight required components. Five "general" items were also included, for a total of 85 items.

The component item averages varied from a low of 2.4 to a high of 3.5. Among the components the highest item averages (3.1 to 3.2) were for the language development, reading, mathematics, staff development, parent participation, and health/auxiliary services components. Item averages for multicultural education and the optional instructional components were 2.8 and 2.9, respectively. The one relatively low-rated component was bilingual education (2.5), the component for which schools described how instructional services were to be offered for limited- and non-English-speaking students.

Program Implementation

In 1975-76 the Department used two methods to examine the nature and quality of program implementation: the monitor and review process and a series of special surveys. Findings from the special surveys are presented later in this part of the report.

The "Program Quality Review Instrument" (PQRI) was designed to facilitate assessment of the quality of school program implementation. This instrument was redesigned for 1975-76 and included 54 items related to a school's ECE-funded program. Of those 54 items 51 were also applied independently to non-ECE kindergarten through grade three programs and/or upper grade ESEA Title I and/or EDY programs. Eleven of the 54 ECE items dealt with the implementation of the program in accordance with the school's program plan (Section I of the PQRI); six dealt with progress toward restructuring or revitalization (Section II of the PQRI); and 37 dealt with the quality of instruction (Section III of the PQRI).

At the time this report was written, program quality review ratings for 951 schools were available for analysis. Of the 951 schools 457 entered ECE in 1975-76, 311 entered ECE in either 1973-74 or 1974-75, and 183 were receiving ESEA Title I and/or EDY funding, but not ECE funding. Table V-4 shows item averages from the 951 schools.

The item averages for ECE grades ranged from 2.9 to 4.2. The item averages for non-ECE grades ranged from 2.1 to 3.9. Individual item averages are presented in Appendix M.

The highest ratings were given in Section I of the PQRI, "Implementation according to plan." No item average was below 3.6 in ECE grades, and none was below 3.3 in non-ECE grades. Implementation of the reading and mathematics components in accordance with the plan received the highest ratings in Section I of the PQRI.

Average ratings for the six items in Section II of the PQRI ranged from 3.4 to 4.1, with one

TABLE V-4

Descriptive Statistics for the 1975-76 Monitor and Review Data for the 54 Items Comprising the Total K-3 Scores and the 51 Items for ESEA Title I and EDY Programs in Grades Four Through Eight

	Section I			Section II			Section III			Total		
	Implementation in accordance with plan			Progress toward comprehensive restructuring or revitalization			Quality of instruction					
Type of program	Number of items	Section mean*	Item mean	Number of items	Section mean	Item mean	Number of items	Section mean	Item mean	Number of items	Total mean	Item mean
ECE	11	43.0	3.9	6	22.7	3.8	37	130.4	3.5	54	196.1	3.6
ESEA Title I and EDY in grades four through eight	10	36.3	3.6	6	20.1	3.4	35	109.2	3.1	51	165.6	3.3

*Sum of average item scores for all items in the section

exception. The average for the item relating to progress toward parent participation and parent education in the non-ECE grades was 2.9. The average for ECE grades on this same item was 3.6, which indicated that the emphasis of ECE on parent involvement was effective in bringing parents into the school program.

Section III of the PQRI, "Quality of instruction," contained the following six subsections:

1. Program planning, implementation, and evaluation
2. Instructional program
3. Health/auxiliary services
4. Parent participation/community involvement
5. Parent education
6. Staff development

The item averages within the subsections varied; and, significantly, no single subsection showed consistently higher scores than the others. The averages for items concerning reading or mathematics were consistently high (3.5 to 3.8), whereas the average for items concerning language development was a relatively low 3.1. The average scores for self-concept and health items were high (3.8 to 4.1), while the lowest average scores (2.1 to 3.0) were those for items relating to parent involvement in non-ECE grades. The only ECE-grade item average below 3.0 was that for regular involvement of parents in program evaluation, for which the average score was 2.9.

Correlations of monitor and review (MAR) scores with school plan scores and California Assessment Program (CAP) grade three reading achievement scores. The relationships between monitor and review (MAR) scores and school plan scores and between MAR scores and California Assessment Program (CAP) grade three reading achievement scores were investigated by means of a correlation analysis. Table V-5 presents the results of that analysis.

The low statistical relationship that was found among the various assessment procedures was not surprising. Each procedure was designed to examine distinct processes: program planning, program implementation, and student achievement. Each review served to provide a description of the program at a given moment in the total process. The plan rating reflected the quality of the school's initial program design, and the monitor and review (MAR) scores reflected the quality of the program at a given time during the implementation of the instructional program.

TABLE V-5

Correlations of State MAR Ratings with Other Ratings for ECE, 1975-76

Type of ECE school	Correlation between MAR rating and other ratings, by source of ratings*	
	School plan score*	CAP third grade reading achievement*
Continuing ECE schools: ECE Phase I and Phase II (Entered ECE in 1973-74 and 1974-75)	.28	.12
New ECE schools: ECE Phase III (Entered ECE in 1975-76)	.20	.08

*The number of schools included in each analysis varied because of the unavailability of complete school plan and MAR files, but in no case were fewer than 144 schools included.

Inter-team reliability of monitor and review ratings. The analysis of the monitor and review (MAR) process in 1975-76 included a study of the reliability of monitor and review team ratings. The reliability was assessed by comparing the ratings that were developed independently at each of 15 schools by each of two monitor and review teams.

The two teams visited the schools and observed the schools' programs at the same time, but they did not discuss their findings during the rating process. One team was officially designated as the team whose scores would be entered in the schools' files. The second team observed and participated in all of the scheduled activities up to the last part of the visit. Each team met separately and completed the rating form independently. After the completion of the form, the official team conducted the exit interview and presented its scores. The observer team participated in the exit interview but did not present its scores. A Spearman rank order correlation was used in the analysis of the 15 pairs of completed monitor and review documents.[4] The correlation coefficient obtained was .92, which indicated a very high inter-team reliability.

[4]Spearman's foot-rule method of gains is a rough method of obtaining an estimate of the relationship between the rank orders of the observations of two variables. The formula for determining the relationship is: $R-1 = \frac{6\Sigma G}{N^2-1}$ in which ΣG equals the sum of the positive difference in rank for each pair of scores and N equals the number of pairs.

Special Surveys

In addition to rating school plans and conducting monitor and review visits to determine institutional change, the Department conducted a number of surveys to examine selected dimensions of institutional change. The need for more detailed information on the effects of ECE, ESEA Title I, and EDY on institutional processes at the district and school levels was pointed out in the *Evaluation Report of ECE, ESEA Title I, and EDY, 1974-75.* The results of the surveys reported on in that report focused largely on specific required or recommended components and provided a variety of information on the nature of these components.

The following areas were addressed in the special surveys of 1975-76:

- Role and function of the school advisory committees in planning
- Opinions of parents and teachers about parent involvement in educational programs funded by ECE, ESEA Title I, and EDY and about adults serving in the classrooms
- Staff development component and staff inservice training needs
- Field review of multicultural education program efforts
- Individualization of instructional practices in language, reading, and mathematics
- Characteristics of reading programs in secondary schools

A summary of each survey for which the findings were sufficiently complete to include in this report follows.

School advisory committees. An in-depth survey of school advisory committees was conducted to provide baseline information about the committees for use in future study of institutional change in elementary schools.

Questionnaires were mailed to a sample of school advisory committees throughout the state for completion by their members at the last committee meeting of the school year. Questionnaires from 197 of the sampled schools were analyzed.

Answers to the questions were considered in light of the implications of school advisory committee involvement in school affairs, in the making of school policies, and in the determination of how and what students learn.

The major questions addressed were:

1. Do the school advisory committees exist, as required by law?
2. Who participates on the committees?
3. How are the school advisory committees organized?
4. How do members perceive their role?
5. What do the school advisory committees do?

All schools in the sample had a school advisory committee, and 65 percent had had a committee for three or more years.

The composition of the committees was fairly homogeneous across the state. Of the committees that were sampled, 97 percent were comprised of a majority of parents. More than half of the committees had more than 70 percent parent membership. The second largest group of participants was school staff members. The remaining membership included representatives from the community and, occasionally, a district staff person or board of education member.

Sixty-six percent of the members of the committees that were sampled were parents, and in most cases their children attended the school in which the parent served on the committee. Almost 90 percent of the members were female. Seventy percent had had some college training; 30 percent had completed 12 or fewer years of school. More than 90 percent of the members belonged to school organizations other than the school advisory committee; 70 percent were active in another school organization.

The size of committees varied across the sample from five to 38 members, with an average membership of 13. School staff members volunteered or were appointed to participate because of their involvement with state-funded and federally funded programs. Parents generally volunteered after being invited to participate by school staff members or other parents. Members generally served as long as they were able and willing, although some schools had a one- or two-year limitation on the members' length of service. Only 4 percent of the membership of the committees was elected.

The committees had a chairperson, who was most often elected by the other committee members. Chairpersons served a one-year term in that capacity. Approximately 50 percent of those who served as chairpersons were parents. Chairpersons prepared the agenda, usually together with the principal or some other staff member, and presided over the meetings.

The degree of procedural formality of the committees varied, depending on the type of school and the length of time that the committee

had been operating. Some committees had written bylaws, which were drawn up and approved by the members or, in some instances, were written by another school-level committee. The bylaws were often copies of the district advisory committee's bylaws. Some school advisory committees had subcommittees that worked in specific areas, such as school plan, parent education, and information exchange. The subcommittees met separately and reported back to the school advisory committee.

Members perceived the school advisory committee as a helping or facilitating body within the school, and, in general, they perceived the principals as wanting help from the committee. They perceived the committee's role as one of providing help in implementing programs and exchanging information between the school and parents. Less than 15 percent of the members perceived the committee as a policy-making body. Members perceived the committee's responsibilities to include monitoring school programs throughout the year, providing parent education, and assisting in preparation of the school plan.

Most committees had a regular meeting time. Ninety percent met at least once each month; 40 percent met more than once each month, especially during busy times of the year, such as when the school plan and final evaluation were being completed. Subcommittees usually met even more often than the committees met, depending upon the specific activity (e.g., a multicultural fair, aide policy review, and recruitment of parent volunteers).

The majority of committee meeting time was spent discussing those areas addressed in the Department of Education guidelines for school advisory committees. The largest proportion of time was spent discussing the program components included in the school plan—reading, multicultural education, and the like. The plan in general, budget revisions, evaluation, and parent activities were the next most frequently discussed items. Staff issues, such as training, grievances, or aide policies, were not discussed frequently.

Members perceived their influence as greatest in areas relating directly to planning, implementing, and evaluating programs. When the committee did handle parent grievances and issues concerning the community, members felt that their opinions and suggestions did have some influence on school policy. Similarly, when the school advisory committee considered staff training and aide policy, members perceived their viewpoints as influencing decisions.

Parent involvement. District-level parent involvement in program planning, implementation, and evaluation has existed by state mandate for the past ten years; school-level parent participation in a variety of roles and activities has been strongly encouraged in ECE schools since the implementation of ECE. The main purposes of this survey were to derive a description of parent involvement and to determine the importance attributed to it by parents and school personnel. Ninety-one schools were included in the sample; opinion survey responses were received from 74 principals, 430 teachers, and 655 parents.

The major questions addressed were:

1. To what extent are parents involved in program planning, implementation, and evaluation?
2. What degree of importance do teachers, principals, and parents attach to parent involvement?
3. To what extent are parents satisfied with their school involvement?

Of the parents who responded to the survey, 45 percent were involved in classroom programs, 42 percent were involved in planning, and 37 percent were involved in evaluation. Approximately 60 percent of responding parents were or had been parent volunteers; about 17 percent had worked as paid teacher aides or tutors. Those parents who were directly involved with the school program cited tutoring of students as the activity in which they were most involved.

For each of the three functions (program planning, implementation, and evaluation), parents reported a moderate degree of involvement. The level of a parent's involvement did not bear any relationship to his or her child's grade in school, the type of program (funding source), or the school population's socioeconomic status.

Parents, teachers, and principals perceived differently the importance of parent involvement in planning and evaluation, with teachers attaching less importance to parent involvement in these two areas than the other two groups did. All groups rated parent involvement in the classroom as above average in importance. The reported actual level of involvement and the level of desired involvement related positively to the importance of involvement as perceived by parents.

In general, parents indicated satisfaction with the available resources and instructional materials, with the performance of their children, and with

their role as parents in the school program. They expressed the belief that parent involvement had a beneficial effect on their child's attitude toward school. They approved of children getting help from parents in the classroom and felt very welcome in the classroom. The general satisfaction with the effects of parent involvement in the classroom was shared by teachers and principals. The levels of satisfaction with communication from the school, and with the school generally, varied with the level of each responding parent's level of involvement.

Staff development. Each school was required to provide special training for personnel serving participating students. The main purpose of this survey was to derive a description of the staff development component in a sample of 181 elementary schools. The principal or the principal's designee was requested to respond to the survey.

The major questions addressed were:

1. What types of personnel participate in the staff development component?
2. What is the reported effectiveness of training in the staff development component?
3. What do schools recommend for improving the abilities of teachers, specialists, aides, administrators, and volunteers to determine trends in the content of staff development programs for 1976-77?
4. What are the reported strengths and weaknesses of the evaluation instruments and methods that schools use to evaluate staff development objectives and activities?

Of the participants 41 percent were volunteers, 20 percent were aides, and 10 percent were advisory committee members. Twenty-nine percent were certificated personnel. Seventy-one percent of the participants served students in kindergarten through grade three. Respondents reported an estimated expenditure for staff development of $18 to $14,250, with an average of $2,490 per school, or 3.6 percent of the total ECE, ESEA Title I, and EDY funds.

The major objectives reported for staff development were the improvement of skills related to specific areas of the curriculum, such as reading and mathematics (29 percent), and improvement of skills in the use of diagnostic/prescriptive techniques (22.7 percent). Seventy-one percent of the respondents reported that the major objective for staff development was attained or exceeded. Workshops (54 percent) were the type of training program most frequently used to attain the major objective.

The two major recommendations for staff development for instructional personnel in 1976-77 involved activities that would result in (1) additional instructional skills in reading, mathematics, oral language development, and multicultural education; and (2) additional skills related to student motivation and attitudes. The major recommendations for principals and other management personnel involved activities that would provide for training in school program management and staff communication techniques.

The most frequent recommendations for improving the method of staff development were for visitations to other schools within and outside the school district, more teacher and aide involvement in planning staff development activities, and a modified teaching day or release time for staff development.

Multicultural education. The multicultural education survey represented an attempt to determine (1) the content and methods of multicultural education in ECE, ESEA Title I, and EDY programs at the elementary level; and (2) the various conceptions of the meaning of the term "multicultural education." A 15-page questionnaire was used to assess multicultural programs in 23 elementary schools.

The major questions addressed were:

1. What are some of the approaches to multicultural instruction being practiced in ECE, ESEA Title I, and EDY school programs?
2. What attention is being given to multicultural staff development?
3. What is the nature of parent and community involvement in the multicultural education component?

A schoolwide multicultural education program was being conducted at 90 percent of the sampled schools. In those cases materials were readily available to all staff. The organizational approaches and patterns that were most often used by the sampled schools for multicultural education included multicultural units; articulation of multicultural content with that in other subject areas; exchanges between schools; exchange teachers from other countries; special events and commemorations; and full-time multicultural resource teachers who visited each classroom at least 30 minutes per week and worked with the teacher in preparation and follow-up.

More than 90 percent of the schools that were sampled identified multicultural staff development as a need in their school plans. The other 10 percent reported that their needs were met by a county inservice training program or believed that their basic staff development need was in the area of reading and other basic skills.

Ninety percent of the sampled schools implemented an inservice training activity related to multicultural education during the past school year. Slightly more than half of this inservice training activity was offered at the school site. More than half of the staff of each school attended the inservice training sessions either at a school or a district site. In more than 50 percent of the schools, one or more staff members took part in college courses for multicultural inservice training purposes. Other sources of training were county programs, bilingual conferences and workshops, curriculum development activities, and exchange living/training in other countries.

In two-thirds of the schools, steps had been taken to identify the multicultural resources that were available in the communities. Respondents reported that these resources were moderately well utilized.

Parents and others representing the ethnic minority groups included in the student populations and communities reported that they were involved to some extent in the planning of multicultural programs.

With regard to the actual implementation of multicultural programs, approximately one-third of the minority group members who were surveyed said that they had been minimally involved, while another one-third stated that they had been very much involved. The least participation by minorities tended to occur in those schools in which students were predominantly Anglo.

Individualization of instruction. Individualization of instruction to meet the specific needs and interests of each student is one of the major goals of early childhood education as well as an important means of accomplishing the goals of compensatory education programs. This survey of instructional practices involved the characteristics of classrooms, instruction, and instructional decisions from which inferences could be made about the extent to which individualization of instruction was occurring.

Survey questionnaires, which addressed either reading instruction *or* language instruction *or* mathematics instruction, were sent to 166, 104, and 80 schools, respectively. The principal at each sampled school was asked to select randomly one teacher to complete the survey. Completed reading survey questionnaires were returned by 112 schools (hereafter called the reading sample); language survey questionnaires were returned by 72 schools (hereafter called the language sample); and mathematics survey questionnaires were returned by 65 schools (hereafter called the math sample). Although each questionnaire was designated as being relevant to reading or language or math, the surveys were basically identical. Only the questions regarding the use of specific texts and materials and the teaching of language skills were different from survey to survey. In the analysis of data, the classroom was considered the sampling unit. Although the reading sample data, the language sample data, and the math sample data were analyzed separately, the findings from the three samples were so similar that they are reported together. In instances in which the results from the three samples did vary, the findings are reported as contrasts or comparisons.

The major questions addressed were:

1. What types of information about students are gathered, and what assessment methods are used to gather information?
2. How is assessment information used in making decisions about instruction, and who makes these decisions?
3. How prevalent is recordkeeping, and how helpful and worthwhile do teachers perceive it to be?
4. Do any impediments to implementation of individualized instructional programs exist?

Two of the most important aspects of individualization of instruction are the extent and nature of instructional decisions that teachers make for children and the kind of assessment information that teachers use to make these decisions. For reading, language, and mathematics, teachers reported that they made more than 90 percent of the specific instructional decisions. Such decisions included those in the areas of selecting specific tasks and instructional levels and grouping for instruction.

Teachers reported that they used a variety of assessment procedures. They used standardized, norm-referenced tests and criterion-referenced tests most often to assess and gather information about achievement, skills, and readiness; and they used teacher observation techniques to assess student interests, attitudes, and learning styles. Many respondents also utilized information from skills

checklists, developmental inventories, and student work.

In addition to using a variety of assessment methods, teachers used a wide range of information to make instructional decisions. For example, they used information about skills, readiness, and achievement to select tasks and instructional levels and to group for instruction. In addition, they used information regarding student interests and learning styles to select instructional media and to determine activities and tasks for students.

Grouping for instruction can enhance the opportunities for individualized instruction. Teachers reported using specific skills in reading, language, and mathematics as the most frequent bases for placing students in instructional groups; they used general readiness in reading or math and achievement level in reading, language, or math less frequently.

In the survey, patterns of assignment of students to fixed or flexible groups in the classroom were examined. Fixed groups were defined as those whose membership did not change throughout the school year. Flexible groups were defined as those whose membership changed from time to time, though not as often as weekly.

The assignment of students to one of three fixed groups, on the basis of their achievement as assessed once a year, seemed to be giving way to more flexible grouping. In roughly 50 percent of the classrooms, both flexible and fixed groups were utilized. Less than 17 percent of the respondents reported that they used only fixed groups, while more than 30 percent reported that they maintained only flexible groups. Few differences were noted among the reading, language, and math sample responses; 18 percent of the math sample reported no fixed or flexible group for math instruction, but the other arrangements (fixed only, flexible only, and fixed and flexible) were comparable across samples.

The extent to which students oversaw or were responsible for their own learning in various activities was another aspect of instructional decision making that was examined. Most activities appeared to be under the supervision of teachers and, to a lesser extent, classroom aides. Students directed themselves to some extent in such activities as coloring, listening to tapes and records, and reading library books. Similarly, teachers reported giving students limited opportunities to select among designated activities, except in such areas as coloring, playing instructional and other games; and using filmstrips, tapes, and records.

To utilize student assessment data and other information in making instructional decisions, teachers kept records of student progress. Whether they used a commercially developed, school-developed, or district-developed system or used an individual student or classroom profile card, teachers viewed their recordkeeping as relatively helpful and worthwhile in facilitating diagnostic/prescriptive teaching. More than 70 percent of the respondents in each sample rated their recordkeeping as "worth it" or "very much worth it," and nearly 60 percent rated their recordkeeping as "helpful" or "very helpful" in carrying out an individualized program. More than 60 percent of the respondents reported that individual teachers selected the particular recordkeeping system to be used and that the overall teaching staff made that decision about 35 percent of the time. Teachers reported assuming virtually all responsibility for keeping classroom records; only a small percentage of respondents reported that anyone else, such as aides, kept records.

When given the opportunity to describe factors that may have impeded the implementation of individualized programs, teachers reported relatively few constraints. Of the respondents in the reading and math samples, less than 20 percent identified or reported obstacles. The obstacles that teachers most frequently reported included lack of adequate personnel training (checked by 37 percent of all respondents) and lack of appropriate materials (cited by 40 percent of the respondents in the reading and math samples and by nearly 70 percent of those in the language sample). Overall, teachers apparently encountered more obstacles in individualization of language instruction than they did in either reading or mathematics; 30 percent of the respondents in the language sample cited inadequate numbers of personnel, and 40 percent cited their own philosophical objections.

Secondary schools. The secondary schools survey focused on reading services provided in ESEA Title I and EDY programs. The person that the principal designated as being most responsible for the reading program in 132 secondary schools responded to a questionnaire concerning the school's reading program.

The purpose of the survey was to identify features of the funded programs relative to program components, student assessment, participation, successes, and problems. The major questions addressed were:

1. What are the characteristics of reading programs in secondary schools receiving compensatory education funds?
2. What functions does the reading specialist perform?
3. To what extent are participants involved in reading programs?
4. What has been accomplished?
5. What obstacles have interfered with the success of programs?

ESEA Title I funds supported about 50 percent of the programs in the schools that were sampled, and EDY and district funds supported most of the remaining programs. Reading specialists conducted 60 percent of the programs. About half of the reading programs were conducted as part of the English program, and about half were conducted as a separate class. The functions that the reading specialists most commonly performed included teaching remedial skills, working with other teachers, and teaching developmental reading.

The greatest emphasis was generally given to comprehension and "survival" reading skills. Vocabulary development also received strong attention. When asked to report the most common instructional practices, respondents listed student diagnosis first. In nearly every program student progress was assessed by means of a combination of standardized tests, teacher-constructed tests, and teacher observations.

On the average the specialists, instructional aides, and teachers spent about 20 hours each per week involved in direct reading instruction. In some cases respondents reported that teachers spent up to 60 hours in such instruction. The average time that students spent in reading instruction each week was approximately five hours, with as much as 25 hours reported in some cases. Students were involved to a moderate degree in the planning of classroom instruction.

Respondents reported success most frequently in individualized instruction (38 percent of the respondents); in certain skill areas, such as phonics and vocabulary (31 percent of the respondents); and in improved self-image of the student (20 percent of the respondents). Eighty-nine percent of the respondents reported obstacles to success. Although the obstacles varied from program to program, those listed most frequently were lack of support or interest from the home (14 percent), poor student attendance (9 percent), and student fear of failure and related emotional problems (8 percent).

Student Achievement Findings

This section of the report contains achievement data on students who participated in ECE, ESEA Title I, and EDY. The findings show how these students scored on (1) school-reported, commercially developed standardized tests; and (2) the California Assessment Program (CAP) tests.

The major advantages of school-reported standardized test scores are that (1) they are the only scores available to assess the progress of students in schools participating in ESEA Title I or EDY but not participating in ECE; and (2) they are based on tests that were chosen by districts to address unique district and school concerns. The important disadvantages of school-reported test scores are that (1) major differences exist among the available standardized tests in terms of their content and in terms of how they describe the progress of students from grade to grade; and (2) many of these tests have norms that—because of the estimation procedure used in the calculation of the norms—may make it appear that students are progressing at a rate greater than that of the national norm. Despite these technical disadvantages, school-reported test scores do provide useful information about the progress of students.

With the expansion of early childhood education and its focus on serving all students in kindergarten through grade three, attention has shifted in the consolidated evaluation report to utilization of California Assessment Program (CAP) schoolwide achievement scores. A major advantage of these scores over the school-reported scores is that they are based on uniform tests administered throughout the state (the *Entry Level Test* for all grade one students and the *Reading Test* for all students in grades two and three). On the other hand, the disadvantages of the California Assessment Program tests are that they are designed to yield only state-, district-, and school-level data and do not provide data on subgroups of students within schools.

The section on student achievement findings for ECE schools contains data from school-reported standardized achievement tests and data from the California Assessment Program (CAP) tests. The section on student achievement findings for schools that received only ESEA Title I and/or EDY funds contains only school-reported data.

Early Childhood Education

Pretest and post-test standard scores for students participating in ECE were used to (1) measure

reading and mathematics achievement gains for students in schools receiving only ECE funds and for students in all schools with ECE funds (ECE only, ECE/ESEA Title I, ECE/EDY, and ECE/ESEA Title I/EDY); and (2) determine the relationship between length of participation in ECE and differences in student performance in reading and mathematics.

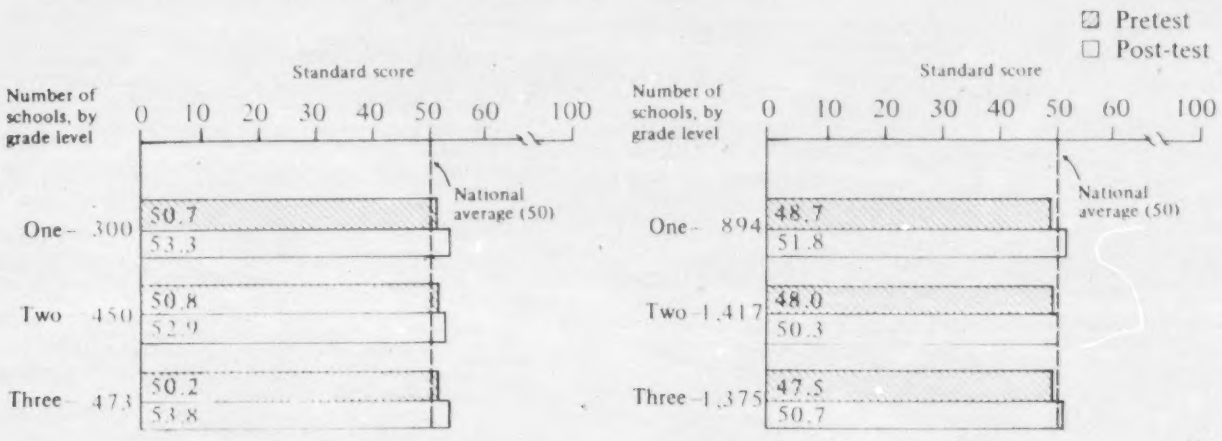
School-reported standardized reading achievement test data. The graph for ECE-only schools in Figure V-8 shows average student reading achievement scores for students in grades one, two, and three in schools receiving only ECE funds. The ECE-only graph indicates that the average pretest score for grade one students was 50.7 (standard score) and that the post-test average was 53.3. Thus, these students gained 2.6 points more than would otherwise have been expected in one year of instruction. While students in ECE-only schools typically scored less than one point above the publishers' national norms for their grade level on the pretest, they exceeded the publishers' norms by 2.9 to 3.8 points on the post-test.

The results suggest that within school years, students in ECE-only schools were continuing to progress in reading at a rate greater than that reflected by the publishers' norms. A similar finding was reported in the *Evaluation Report of ECE, ESEA Title I, and EDY, 1974-75.* On the basis of 1974-75 data, attempts were made to limit the possibility of biased norms being responsible for such significant gains. The statistical procedures that were employed in 1975-76 reduced the gains only slightly and confirmed the finding of significant gains.

The other graph in Figure V-8 shows reading achievement scores for students in all ECE schools (ECE only, ECE/ESEA Title I, ECE/EDY, and ECE/ESEA Title I/EDY). That graph shows that pretest achievement scores in grades one, two, and three were from 2.5 to 1.3 points below the national norms, but that post-test scores were from 0.3 to 1.8 points above the national norms. These results indicate that, on the average, students in ECE schools were progressing in reading at a rate greater than that reflected by the publishers' norms.

In addition to looking at the pretest and post-test scores *within* each grade level, one can look at scores *across* grade levels for another interpretation.[5] By looking across grade levels in

[5] Although scores at different grade levels are obviously not from the same students, the scores are from nearly the same group of ECE schools. Also, the scores for grades one, two, and three in Figure V-8 do not represent an equal number of schools, because many schools were granted waivers from standardized testing for specific grade levels.



Schools Receiving Early Childhood Education Funds Only

Schools Receiving Early Childhood Education Funds Only or in Combination with ESEA Title I or EDY

Fig. V-8. Pretest and post-test standard scores in reading achievement, by grade level, for all schools participating in early childhood education funded programs, 1975-76

NOTE: School scores were weighted on the basis of the number of students tested. "Number of schools, by grade level" indicates the number of schools that reported usable achievement data for each grade level.

each of the graphs in Figure V-8, the reader can see that the pretest and post-test scores were about the same for each grade level. This may suggest that across, rather than within, grade levels, students in ECE schools were progressing at about the same rate as that reflected by the publishers' norms. Thus, two somewhat conflicting interpretations emerge from the graphs: the pretest to post-test interpretation (within school years) and the across-grade-levels interpretation (across school years). If the reader makes the most conservative inference, that the students in ECE schools were progressing at the normative average rate, the graphs reflect a positive finding, since, viewed historically, schools with student populations similar to those of ECE schools tend to be below average in reading achievement.

The three graphs in Figure V-9 show average 1975-76 reading achievement scores for students in all ECE schools, grouped by the year in which the schools entered ECE: ECE Phase I (entered ECE in 1973-74), ECE Phase II (entered ECE in 1974-75), and ECE Phase III (entered ECE in 1975-76). The graphs in Figure V-9 show results similar to those in Figure V-8 and can be interpreted in a similar fashion.

California Assessment Program reading achievement data. Because ECE serves all students in kindergarten through grade three in participating schools, average school California Assessment Program (CAP) reading scores can also be used to examine the progress of students in ECE schools in reading achievement. California Assessment Program (CAP) grade three reading achievement scores were selected as the most appropriate measure of the effects of ECE on reading achievement. The grade three scores seem to be an appropriate outcome measure in the sense that they reflect the performance of students at the end of their period of participation in ECE, which in 1975-76 ranged from one to three years. It is important to note that since ECE began in 1973-74, grade three California Assessment Program (CAP) data for students who have spent a full four years (kindergarten through grade three) in ECE will not be available until the consolidated report is made for the 1976-77 school year.

The California Assessment Program (CAP) grade two scores and the gain scores from grade two to grade three are useful as an interim assessment of the effects of ECE. These two scores are interim measures in the sense that they show how students are doing while still in ECE.

Normally, no single set of figures can provide a complete picture of student achievement patterns in ECE schools. Accordingly, the Department analyzed California Assessment Program (CAP) reading achievement scores from several different perspectives, starting from the very simple and moving progressively to the more complex. The following analyses are presented:

- Historical profiles of grade two and grade three reading achievement from 1972-73 through 1975-76 for ECE schools, by year of entry into ECE, as well as for non-ECE schools
- Longitudinal reading achievement profiles of school scores from grade two to grade three for ECE schools, by year of entry into ECE, and for a matched group of non-ECE schools
- Changes in residual reading achievement scores of grade three students in ECE schools, by years of participation in ECE[6]

The reader should note that all tables except Table V-10 present school residual scores in terms of "weighted averages." Weighting is a statistical technique used to take school size into account in computing average scores for groups of schools. For example, if student scores for two schools were being averaged and School A had 150 students tested and School B had 200 students tested, the average scores from School B would be weighted more heavily than those from School A to allow for the larger number of students tested. Thus, weighted averages for large groups of schools portray better the average performance of *students* within those schools and do not portray as well the performance of the average *school* within the group. On the other hand, the "unweighted average" scores presented in Table V-10 tend to reflect school performance trends better in that the scores are not weighted to allow for the different number of students tested from school to school. The statistical procedures used in these analyses are described fully in Appendix K.

Historical profiles of grade two and grade three reading achievement in ECE schools, 1972-73 through 1975-76. The first analysis of California Assessment Program (CAP) reading achievement

[6]A residual achievement score is defined as the difference between a school's actual score (average score of its students) and its predicted score. A positive change in residual score indicates improvement relative to prediction on the basis of the background characteristics of the student population. Negative changes in residuals indicate a decline in this relative performance.

data represents a simple approach to assessing the relationship of ECE to grade two and grade three reading achievement. This historical approach shows how students in ECE schools performed over the last four years, before ECE was implemented and in each year as additional schools were phased into ECE. Separate historical profiles are presented for all schools within each of the three phases of ECE, on the basis of year of entry, and for all non-ECE schools. Grade three scores are shown in Table V-6, and grade two scores are shown in Table V-7. In both tables 1975-76 scores represent the percent of questions that students answered correctly on the California Assessment Program (CAP) *Reading Test*. Scores from the other three years have been adjusted so that they are comparable to the 1975-76 scores. The shaded areas indicate the scores for ECE schools.

At least three important inferences can be drawn from the data in Table V-6. First, students in ECE schools in the aggregate had a history of low achievement prior to the time that the schools entered ECE. In each year the achievement scores of students in the schools that were selected to

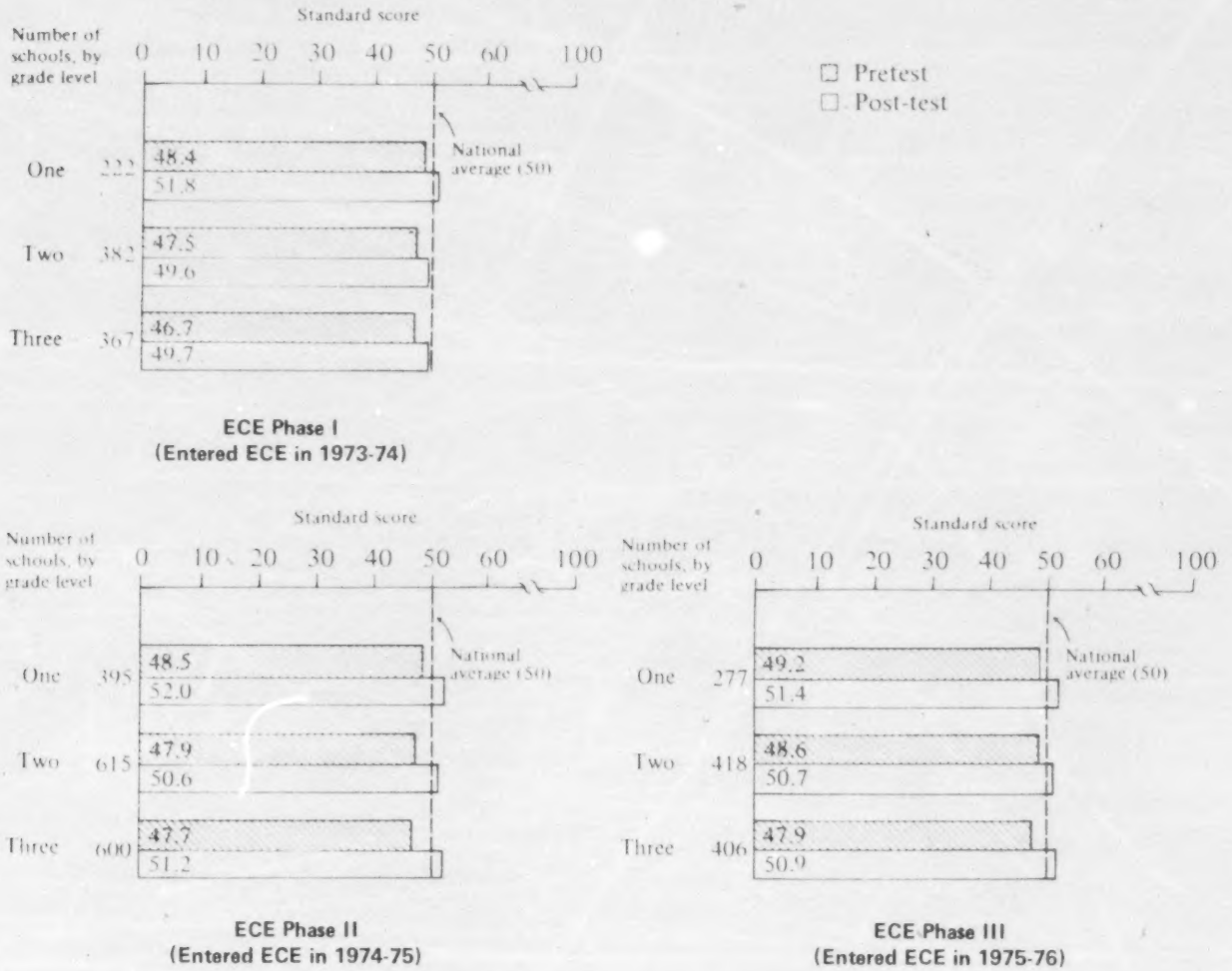

Standard score
Number of schools, by grade level
0 10 20 30 40 50 60 100
Pretest
Post-test
National average (50)
One 222 48.4 51.8
Two 382 47.5 49.6
Three 367 46.7 49.7
ECE Phase I (Entered ECE in 1973-74)
One 395 48.5 52.0
Two 615 47.9 50.6
Three 600 47.7 51.2
ECE Phase II (Entered ECE in 1974-75)
One 277 49.2 51.4
Two 418 48.6 50.7
Three 406 47.9 50.9
ECE Phase III (Entered ECE in 1975-76)

Fig. V-9. Pretest and post-test standard scores in reading achievement, by grade level and year of entry, for all schools participating in early childhood education funded programs, 1975-76

NOTE: School scores were weighted on the basis of the number of students tested. "Number of schools, by grade level" indicates the number of schools that reported usable achievement data for each grade level.

enter ECE were lower than those of students in schools not selected for ECE. Second, grade three reading achievement scores for students in both ECE and non-ECE schools were virtually unchanged over the four-year period.

The reader can see by looking across each of the rows in Table V-6 that the largest change over the four-year period was an increase of 0.3. This increase represents an increase of 0.3 percent of the questions answered correctly on the California Assessment Program (CAP) *Reading Test* by participating students. Further analysis of the California Assessment Program (CAP) data, however, indicates that this relatively stable performance in grade three reading achievement is the result of averaging some rather positive average gains of a large group of ECE schools with the average declines of a much smaller group of other ECE schools. The group of ECE schools whose students seem to have improved most on grade three CAP reading achievement scores is characterized by moderate-to-high scores on the *Entry Level Test*, which is given at the beginning of grade one. The group with an average decline on this same test is characterized by *Entry Level Test* scores in the lowest 10 or 20 percent statewide. This characterization of the two groups is not entirely satisfactory, however. First, these scores reflect only averages of very large groups of schools. Within each of the groups, the average scores for

TABLE V-6

Grade Three CAP Reading Achievement Scores for the Years 1972-73 Through 1975-76 for Non-ECE Schools and by Years of Participation for ECE Schools

Year / Test / Type of school	1972-73 *Coop*	1973-74 *CAP I*	1974-75 *CAP II*	1975-76 *CAP II*
ECE Phase I schools (Entered ECE in 1973-74, N = 406)	76.9*	76.7*	76.8*	77.0
ECE Phase II schools (Entered ECE in 1974-75, N = 635)	79.9*	79.7*	79.9*	80.0
ECE Phase III schools (Entered ECE in 1975-76, N = 475)	80.0*	80.1*	79.8*	80.1
Non-ECE Schools (N = 2,744)	82.2*	82.2*	82.2*	82.2

TABLE V-7

Grade Two CAP Reading Achievement Scores for the Years 1972-73 Through 1975-76 for Non-ECE Schools and by Years of Participation for ECE Schools

Year / Test / Type of school	1972-73 *Coop*	1973-74 *CAP I*	1974-75 *CAP II*	1975-76 *CAP II*
ECE Phase I schools (Entered ECE in 1973-74, N = 406)	63.2*	62.0*	62.0*	62.1
ECE Phase II schools (Entered ECE in 1974-75, N = 635)	65.3*	65.2*	65.0*	65.8
ECE Phase III schools (Entered ECE in 1975-76, N = 475)	66.3*	66.4*	65.9*	65.3
Non-ECE schools (N = 2,744)	68.5*	68.7*	68.9*	68.8

NOTE: School scores were weighted on the basis of the number of students tested.

*Achievement scores for 1972-73, 1973-74, and 1974-75 are estimates. The original scores for these years have been adjusted so that they have the same mean and standard deviation as the 1975-76 CAP II scores.

some schools improved, while those of others declined. Second, numerous other meaningful indicators of how these two groups of ECE schools differ from one another may exist. A more complete discussion of the performance of subgroups of ECE schools is included in the CAP residual scores analyses later in this section. Third, a very slight overall improvement in scores is noted in ECE schools. In particular, grade three reading achievement scores in schools that entered ECE three years ago (Phase I schools) declined during the schools' first year in ECE. The scores improved in the schools' second and third years in ECE and by the third year were slightly higher than they had been before the schools entered ECE. The reading achievement scores in Phase II and Phase III schools, which entered ECE in 1974-75 and 1975-76, respectively, improved slightly, without any initial decline.

Table V-7 presents grade two reading achievement scores. At least three important inferences can be drawn from the figures in Table V-7. First, they show that before ECE schools entered ECE, their students scored lower on grade two reading achievement tests than students in non-ECE schools scored. Second, grade two scores fluctuated more than the grade three scores over the four-year period. Third, grade two scores in ECE schools declined slightly. In particular, the schools that entered ECE in 1973-74 (Phase I) experienced a drop in grade two reading achievement. The scores in Phase II schools, which entered ECE in 1974-75, declined during the schools' first year in ECE but improved during the second year to a point beyond the pre-ECE level. The Phase III schools, which entered ECE in 1975-76, experienced a decline in grade two scores.

Examined together, tables V-6 and V-7 indicate that in ECE schools grade two reading achievement scores have been declining slightly and grade three scores have been improving slightly. This inference needs to be qualified, however, by drawing attention to the fact that the schools in the three phases of ECE and the non-ECE schools differ from one another in terms of a variety of student background characteristics. Since differences in background characteristics can have a profound impact on student achievement scores, the next two analyses are designed to allow for adjustments statistically for background factors; that is, they allow for "control" of background factors. On the other hand, the adjustments result in a certain amount of statistical abstraction in program comparisons. The focus of the comparisons is no longer simply on test scores; it is on scores as they appear after adjustments have been made.

Longitudinal comparison of ECE schools and a similar group of non-ECE schools. For a longitudinal comparison of ECE schools with non-ECE schools, all schools were blocked on the basis of 1975-76 data indicating school size, percent of minority enrollment, and predicted grade three reading achievement; and non-ECE means were computed by means of an accepted statistical procedure.[7]

Longitudinal profiles of the three phases of ECE schools and of the blocked group of non-ECE schools are presented in Table V-8. The profiles are longitudinal in the sense that they trace the change in average school scores from grade two to grade three over the span of one year. The first column in Table V-8 shows California Assessment Program (CAP) reading achievement scores for grade two students in 1974-75. The second column shows the scores of grade three students in the same group of schools on the identical reading achievement test in 1975-76. The third column shows how much progress was made from grade two to grade three.

Several inferences can be drawn from the figures in Table V-8. Students in ECE schools had lower grade two reading achievement scores in 1974-75 than students in a similar group of non-ECE schools had. When grade three students in the same schools were tested the next year (1975-76), those in ECE schools continued to score lower in the absolute than did those in the similar group of non-ECE schools. However, longitudinal gain scores of students in the ECE schools were larger than those of students in the non-ECE schools, indicating that greater gains were made in the ECE schools than were made in the non-ECE schools.

Changes in residual reading achievement scores. Another approach to assessing the effectiveness of ECE is to look beyond the aggregate performance of students in ECE schools and examine student achievement data for ECE schools with different background characteristics. The analyses that follow contain descriptions of student achievement in various subgroups of ECE schools. The reader should view these analyses with caution. First, they are much more complex than those typically presented in program evaluation reports because

[7] All schools were blocked into 180 cells (3x3x20) on the basis of three levels of school size, three levels of percent of minority enrollment, and 20 levels of grade three predicted scores. The means shown in Table V-8 are weighted and averaged over the 180 cells. A full discussion of the procedures used is included in the appendix.

they require extensive use of data on school background factors as well as data on student achievement. Second, a detailed technical review of these data has not yet been completed. Upon completion a supplementary technical report will be provided. These cautions are not meant to minimize the importance of these data; they are merely intended to alert the reader to the fact that as these analyses continue, specific conclusions and interpretations may become clearer.

The Department hopes that these analyses can be a first step in examining the range of student performance levels among ECE schools and that subsequent in-depth studies will provide data leading to appropriate program modification and improvement strategies.

Tables V-9 through V-11 provide an analysis, based on California Assessment Program (CAP) data, of residual reading achievement scores. Again, a residual score is defined as the difference between a school's actual score (average score of its students) and its predicted score. Predicted scores are statistical estimates based on background characteristics of the school and its students.[8] A positive change in residual scores indicates improvement in performance relative to prediction. A negative change in residual scores indicates a decline in performance relative to prediction.

For purposes of determining whether changes in residual achievement were different in schools that served pupils with different background characteristics, schools were divided into three groups on the basis of average student performance on the 1973-74 *Entry Level Test*. While several variables could have been used as a basis on which to group schools, *Entry Level Test* scores were chosen for two reasons: they relate most strongly to achievement test scores, and they are objective.

For the initial data analysis, ten groups of schools were formed (by decile of 1973-74 *Entry Level Test* scores). Three general patterns of scores were noted from an examination of the mean test scores for these ten groups of schools: one pattern for those schools whose students' *Entry Level Test* scores ranged from the 1st to the 20th percentiles; another for those schools whose students scored between the 21st and the 60th percentiles; and a third for those whose students scored between the 61st and the 99th percentiles. Analyses were done for each of the three groups. Data from those analyses are included in tables V-9 through V-11.

[8] These background characteristics included 1973-74 *Entry Level Test* score, socioeconomic index, number of students tested, percent of students speaking English only, and mobility rate.

TABLE V-8

Reading Achievement Gain Scores for ECE Schools and Blocked Groups of Non-ECE Schools, 1974-75 and 1975-76, from California Assessment Program

Type of school	Grade two scores 1974-75	Grade three scores 1975-76	Gain scores (number correct, 1975-76, less number correct, 1974-75)
Phase I schools (Three years in ECE) N = 401	65.8	80.3	14.5
Phase II schools (Two years in ECE) N = 635	65.6	80.0	14.4
Phase III schools (One year in ECE) N = 475	67.4**	80.7	13.3
Non-ECE schools N = 2,744	68.4	81.7	13.3

NOTE: Schools were blocked on the basis of (1) predicted grade three scores; (2) minority student enrollment; and (3) school size.

**Grade two score is prior to entry into ECE.

Table V-9 shows the change in residuals, based on weighted average scores, for each of the groups for one, two, and three years of participation in ECE.

Several important inferences can be drawn from the data in Table V-9. First, the relationship between ECE and improved grade three reading achievement appears to be much stronger than the relationship that one notes from examining statewide averages alone. In schools whose entering students averaged between the 21st and the 99th percentiles on the 1973-74 *Entry Level Test*, grade three reading achievement improved markedly beyond predicted levels after three years in ECE. Second, in schools whose entering students averaged below the 20th percentile on the 1973-74 *Entry Level Test*, grade three reading achievement declined relative to prediction after three years in ECE.

The improvement in residual scores indicates that, on the average, ECE seems to be associated with improved residual scores in reading in a majority of schools—a group of schools whose students averaged from the 21st to the 99th percentiles on the *Entry Level Test*. On the other hand, ECE seems to be associated with declining residuals in a much smaller group of schools whose students had lower average levels of learning readiness when they entered grade one. Table V-10 contains the same data reported in Table V-9, except that school scores have not been weighted to allow for different school sizes. When viewed from the perspective of average school performance, these data lead to somewhat different interpretations. For example, average declines were still reflected in schools whose students' *Entry Level Test* scores were in the lowest 20 percent, but the declines were neither as consistent nor as sharp as those shown in the weighted averages in Table V-9.

TABLE V-9

Changes in Residual Scores (Weighted Averages) on Grade Three Reading Achievement Tests After One, Two, and Three Years of Participation in ECE, by Three Levels of Performance on the 1973-74 *Entry Level Test*

Number of years in ECE	Changes in residual scores, grouped by percentile rank on 1973-74 *ELT*			All ECE schools (weighted average)
	1–20	21–60	61–99	
One year	.00	.05	+.06	.00
Two years	.15	+.05	+.06	−.01
Three years	−.24	+.19	+.18	+.03

NOTES: Residuals were standardized to have a mean of zero and a standard deviation of one. Changes in residuals after one year of ECE were obtained by first calculating the average residual for ECE schools in the year before they entered ECE, calculating their average residual in their first year in ECE, and then subtracting the former from the latter. Similarly, changes in residuals after two and three years in ECE were obtained by subtracting the preprogram residuals of ECE schools from their residuals after two and three years, respectively, in ECE.

The numbers of students and schools included in tables V-9 through V-12 varied because of the different numbers of schools involved in ECE in each year. In all cases the number of students for whom data were analyzed was greater than 6,200.

TABLE V-10

Changes in Residual Scores (Unweighted Averages) on Grade Three Reading Achievement Tests After One, Two, and Three Years of Participation in ECE, by Three Levels of Performance on the 1973-74 *Entry Level Test*

Number of years in ECE	Changes in residual scores, grouped by percentile rank on 1973-74 ELT			All ECE schools (unweighted average)
	1–20	21–60	61–99	
One year	−.04	−.07	+.07	−.02
Two years	−.15	+.02	+.14	−.02
Three years	−.14	+.14	+.19	+.02

NOTES: Residuals were standardized to have a mean of zero and a standard deviation of one. Changes in residuals after one year of ECE were obtained by first calculating the average residual for ECE schools in the year before they entered ECE, calculating their average residual in their first year in ECE, and then subtracting the former from the latter. Similarly, changes in residuals after two and three years in ECE were obtained by subtracting the preprogram residuals of ECE schools from their residuals after two and three years, respectively, in ECE.

The numbers of students and schools included in tables V-9 through V-12 varied because of the different numbers of schools involved in ECE in each year. In all cases the number of students for whom data were analyzed was greater than 6,200.

A comparison of tables V-9 and V-10 may indicate that larger schools are accounting for a greater proportion of the decline in residual scores. However, this is a preliminary interpretation that must be followed up with much more extensive analyses of both the California Assessment Pro-

gram (CAP) data and other appropriate student background and school factors.

The breakdown of changes in residuals into *Entry Level Test* percentile groups for grade two reading scores is presented in Table V-11. While the differences for grade two scores among the three *Entry Level Test* groups were not as sharp as those for grade three scores, the grade two scores of the bottom 20 percent group, in general, declined more than did the grade two scores of the other groups. The decline for grade two scores, however, was not as steep as that for grade three scores. These data also seem consistent with the previous finding, from California Assessment Program (CAP) actual scores, that in many ECE schools an initial decline was experienced in grade two reading scores, followed by a marked upturn by the end of grade three. This interpretation is supported by the following analysis, in which the difference between grade two and grade three residual scores from one year to the next is considered. The residual scores of 1973-74 ECE grade two students were subtracted from the residual scores of 1974-75 grade three students from the same schools. Similarly, 1974-75 ECE grade two students' residual scores were also subtracted from the residual scores of 1975-76 grade three students from the same schools. The corresponding changes for non-ECE schools were computed in the same manner. These data are reported in Table V-12.

TABLE V-11

Changes in Residual Scores (Weighted Averages) on Grade Two Reading Achievement Tests After One, Two, and Three Years of Participation in ECE, by Three Levels of Performance on the 1973-74 *Entry Level Test*

Number of years in ECE	Changes in residual scores, grouped by percentile rank on 1973-74 *ELT*			All ECE schools
	1–20	21–60	61–99	
One year	−.12	−.17	−.07	−.12
Two years	−.17	−.03	+.01	−.06
Three years	−.18	−.12	−.06	−.13

NOTES: Residuals were standardized to have a mean of zero and a standard deviation of one. Changes in residuals after one year of ECE were obtained by first calculating the average residual for ECE schools in the year before they entered ECE, calculating their average residual in their first year in ECE, and then subtracting the former from the latter. Similarly, changes in residuals after two and three years in ECE were obtained by subtracting the preprogram residuals of ECE schools from their residuals after two and three years, respectively, in ECE.

The numbers of students and schools included in tables V-9 through V-12 varied because of the different numbers of schools involved in ECE in each year. In all cases the number of students for whom data were analyzed was greater than 6,200.

TABLE V-12

Longitudinal Changes (1973-74 Through 1975-76) in Residual Scores (Weighted Averages) from Grade Two to Grade Three for ECE and Non-ECE Schools, by Three Levels of Performance on the 1973-74 *Entry Level Test*

Type of school	Changes in residual scores, grouped by percentile rank on 1973-74 *ELT*		
	1–20	21–60	61–99
ECE schools	−.22	+.26	+.07
Non-ECE schools	−.10	+.11	−.11

NOTES: Residuals were standardized to have a mean of zero and a standard deviation of one. Changes in residuals after one year of ECE were obtained by first calculating the average residual for ECE schools in the year before they entered ECE, calculating their average residual in their first year in ECE, and then subtracting the former from the latter. Similarly, changes in residuals after two and three years in ECE were obtained by subtracting the preprogram residuals of ECE schools from their residuals after two and three years, respectively, in ECE.

The numbers of students and schools included in tables V-9 through V-12 varied because of the different numbers of schools involved in ECE in each year. In all cases the number of students for whom data were analyzed was greater than 6,200.

Table V-12 indicates that ECE schools whose students scored from the 21st to the 99th percentiles on the 1973-74 *Entry Level Test* showed much larger gains in residual scores from grade two to grade three than did non-ECE schools. On the other hand, ECE schools whose students scored in the lower range on the 1973-74 *Entry Level Test* showed smaller gains than non-ECE schools showed from grade two to grade three. It is also important to note that residual scores for both ECE and non-ECE schools between the 1st and 20th percentiles declined from grade two to grade three, although the declines in non-ECE schools did not seem to be as steep. Interestingly, residual scores between grade two and grade three for non-ECE schools in the upper *Entry Level Test* range (61st to 99th percentiles) also declined.

The question of whether the criteria by which ECE schools are initially selected may be introduc-

ing bias into these analyses will require further examination. The preliminary data shown in Table V-13 indicate that within schools whose students' *Entry Level Test* scores were in the lowest 20 percent, ECE schools included a disproportionate share of students who scored in the lowest 10 percent on the test. Thus, the apparently steeper decline in residual scores for ECE schools may be, in part, a result of their overrepresentation in the lower end of the 1 to 20 percent *Entry Level Test* range; and the decline may be as great, or perhaps even greater, for similar non-ECE schools. The similar patterns in Table V-12 for non-ECE schools are a good example of why these further analyses are necessary.

TABLE V-13

Number of Students in ECE and Non-ECE Schools Scoring in Percentiles 1–20 on the 1973-74 *Entry Level Test*

Percentiles	Number of students	
	ECE	Non-ECE
Percentiles 1–10	16,876	19,060
Percentiles 11–20	10,790	17,141

In summary, the residual change analysis, although still incomplete, has resulted in the isolation of stronger ECE relationships with improvement in reading achievement than were apparent in prior analyses. When schools were divided into three levels of average *Entry Level Test* performance, strong positive longitudinal changes in grade three residual scores were found to be associated with ECE schools in the 21st to 99th percentile *Entry Level Test* range. On the other hand, longitudinal declines in average residual scores were noted among schools in the 1st to 20th percentile *Entry Level Test* range. These declines were more marked for ECE than for non-ECE schools. Some doubts about the meaning of the decline were raised by similar patterns in non-ECE schools. The importance of locating more precisely the achievement trends among subgroups of ECE and non-ECE schools was noted. Other preliminary data that were mentioned made conclusive interpretations premature.

Apart from the technical issues already described, the findings have important implications for further study of both ECE and non-ECE schools. More thorough studies are needed of the relationships between changes in residual scores and background factors other than the *Entry Level Test* scores. It is important to note that, although subgroups of schools were identified on the basis of students' *Entry Level Test* performance, each of the subgroups included a large number of schools with different background characteristics and performance levels. Thus, it may be possible to identify from among those student and school characteristics for which data are already available those characteristics that seem to be associated with increasing residual scores and those associated with declining residual scores. For example, preliminary analyses indicated that very large schools accounted for a disproportionate share of declining residual scores in the lowest 20 percent *Entry Level Test* range, even after appropriate adjustments had been made for the number of students involved. Other important variables that have not yet been examined in depth include the proportion of disadvantaged students and limited- and non-English-speaking students in the schools in question. The results of each of these analyses will be included in the forthcoming supplementary technical report.

Further analyses of the relationshp of school background factors to performance are likely to raise important questions for field research. Once positive and negative performance trends have been clearly identified and related to school characteristics, specific educational questions can be examined. For example, what are the practices that seem to be associated with improving performance in schools with similar background characteristics? Do specific practices that seem to produce improvements in performance in schools with one set of background characteristics have little or no effect in schools with different background factors? What are the effects of summer school programs on student achievement scores?

The most important general implication of these findings is that they suggest the need to move beneath the level of statewide or even subgroup analysis of reading achievement performance to examine the specific school characteristics and practices that are related to changes in performance. Studies of this kind will involve time and resources. Therefore, in the coming years the Department's special surveys, which are distributed with the consolidated evaluation, will focus on these questions. The special surveys to be used for next year's report will provide for a careful analysis of several important questions that are expected to arise from further review of the data described earlier.

The reader should bear in mind that all of the analyses reported in this section focus on only one indicator of school performance: reading performance on the grade two and grade three California Assessment Program *Reading Test*. Many would argue that improving reading performance is not the only goal, or even the most important goal, of the schools. Thus, as research into the factors that influence reading achievement continues, it is essential that an attempt be made to identify more precisely other school processes and outcomes that may be considered important.

Mathematics. Pretest and post-test standard scores were calculated for ECE students who received instruction in mathematics. The data presented in Figure V-10 indicate that students in ECE-only schools scored higher on both the pretest and the post-test than did students in schools funded by ECE in combination with other programs and that the average post-test achievement for students in all ECE schools was at or above the national average.

Mathematics achievement gains for students in grades one, two, and three were also contrasted among ECE schools, grouped by the year in which the schools entered ECE.

The three graphs in Figure V-11 indicate that student performance was generally comparable on both the pretest and the post-test, regardless of when the school entered ECE. The reader should note, however, that students at all grade levels typically attained a post-test standard score in mathematics at or above the national average.

ESEA Title I and EDY

This section contains information about student achievement in Title I-only schools, EDY-only schools, and Title I/EDY-only schools. Reporting the data in a single section is designed to eliminate duplication in reporting, since a vast majority of ESEA Title I and/or EDY schools received both types of funds. Also, data are presented only for grades one through eight because (1) relatively few secondary schools conducted programs; and (2) out-of-level testing was frequently done at those secondary schools that did conduct programs. The reader should note that no ECE schools are reported on in this section.

Reading. A comparison between pretest and post-test standard scores in reading for students in schools that received only ESEA Title I or EDY funds showed a consistent movement toward the

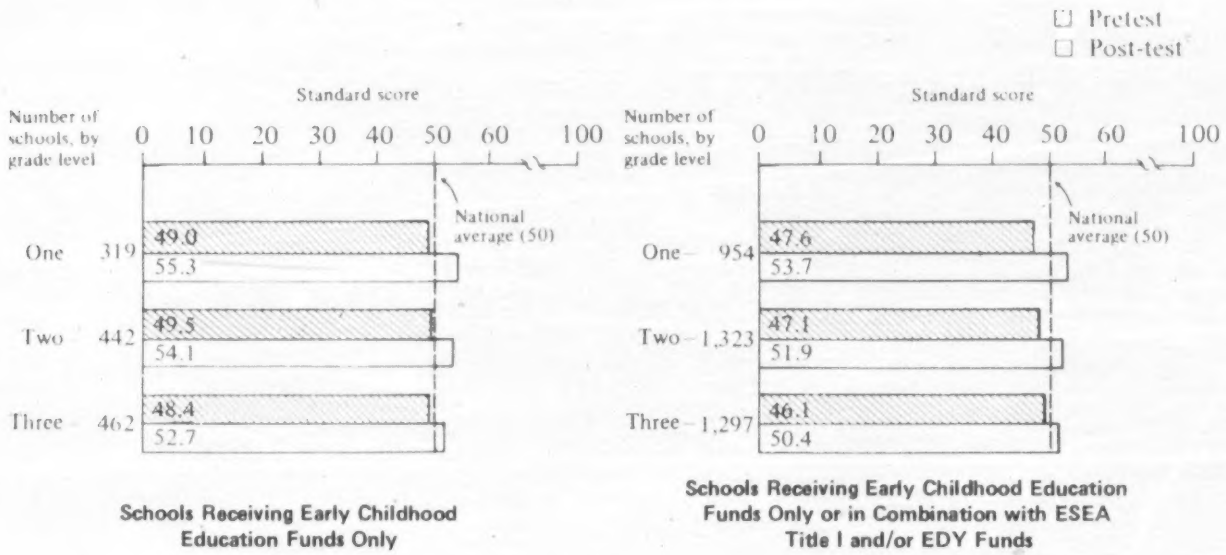


Fig. V-10. Pretest and post-test standard scores in mathematics achievement, by grade level, for schools participating in early childhood education funded programs, 1975-76

NOTE: School scores were weighted on the basis of the number of students tested. "Number of schools, by grade level" indicates the number of schools that reported usable achievement data for each grade level.

national norm. The findings displayed in Figure V-12 indicate that students in grades one through four made the greatest gains and that students in grades five through eight tended to have progressively lower pretest and post-test scores. Analyses of weighted standard score gains revealed that, across all grades, students in ESEA Title I-only schools typically gained 3.1 standard score points; students in EDY-only schools showed an increase of 2.8 standard score points; and, as a group, students in all combinations of ESEA Title I and EDY schools (ESEA Title I only, EDY only, and ESEA Title I/EDY only gained an average of 2.5 standard score points.

Mathematics. Figure V-13 shows standard score gains in mathematics achievement. The graphs indicate that students in ESEA Title I and EDY schools increased in position relative to the national average at all grade levels. As in reading, students in the primary grades made the greatest gains, while those in grades five through eight tended to have decreasing pretest and post-test scores. Comparisons by funding source show that students in ESEA Title I-only schools, as a group, gained 4.3 standard score points; EDY students gained an average of 4.0 standard score points; and students in all compensatory education schools gained an average of 3.7 standard score points.

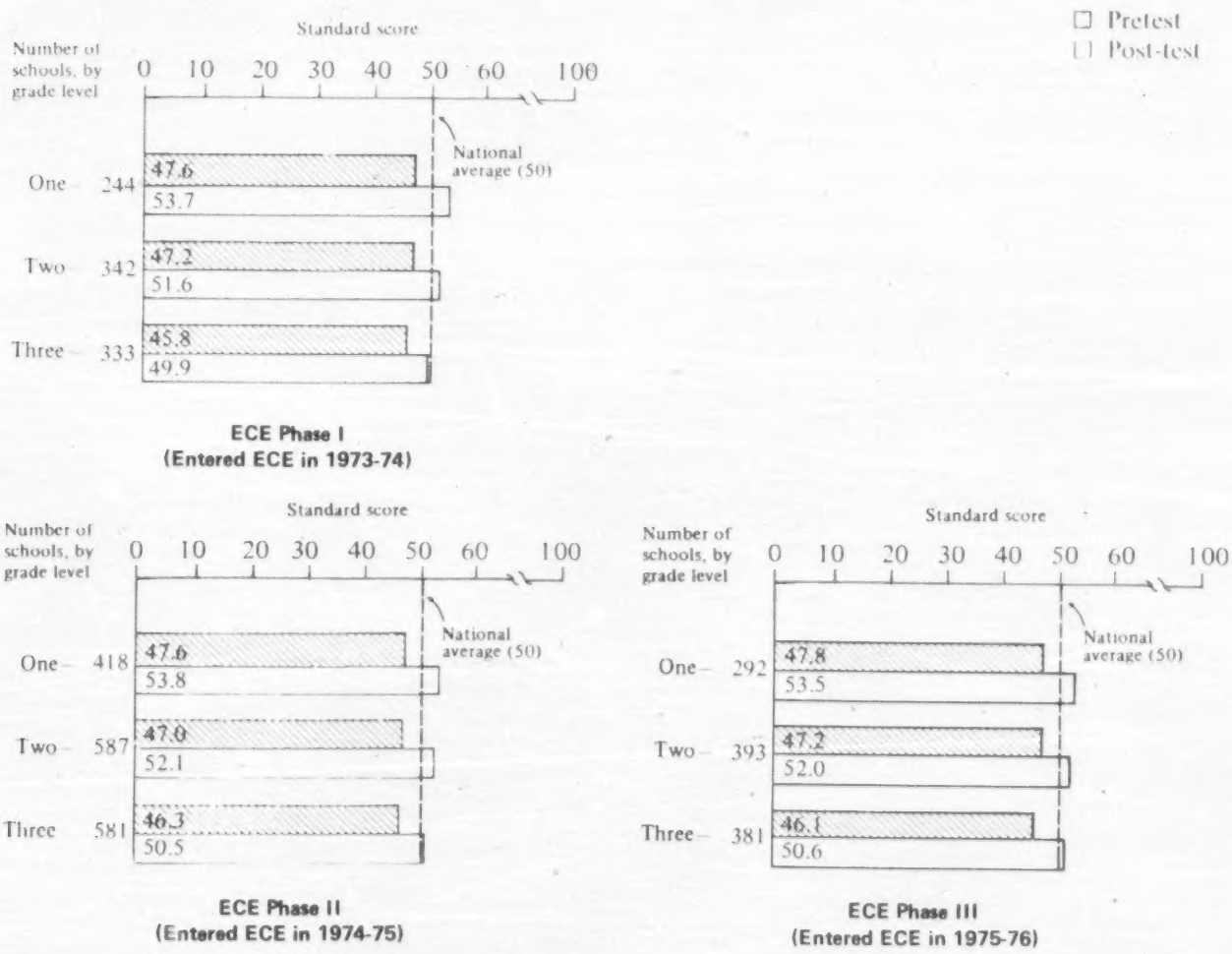


Fig. V-11. Pretest and post-test standard scores in mathematics achievement, by grade level and year of entry, for schools participating in early childhood education funded programs, 1975-76

NOTE: Schools scores were weighted on the basis of the number of students tested. "Number of schools, by grade level" indicates the number of schools that reported usable achievement data for each grade level.

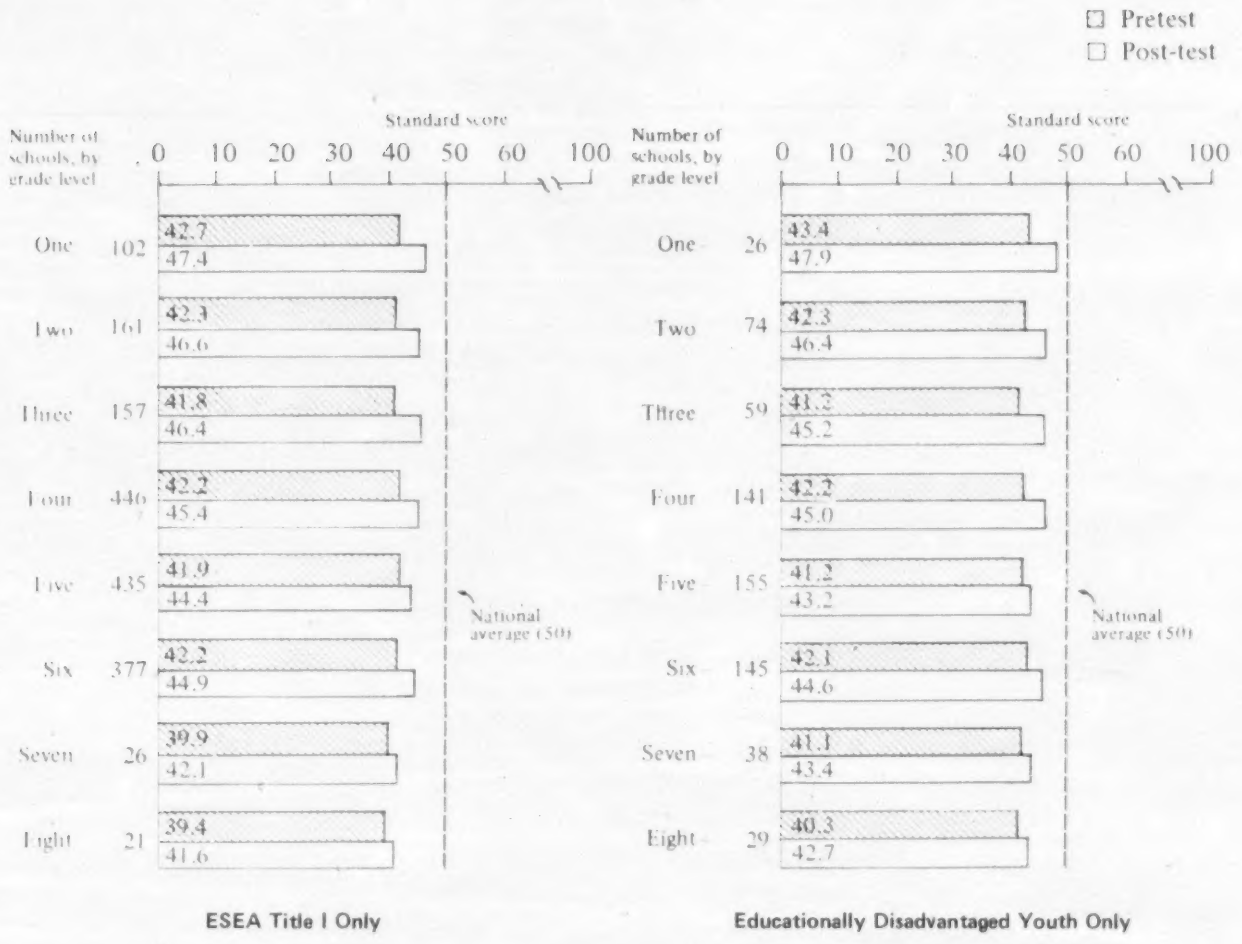
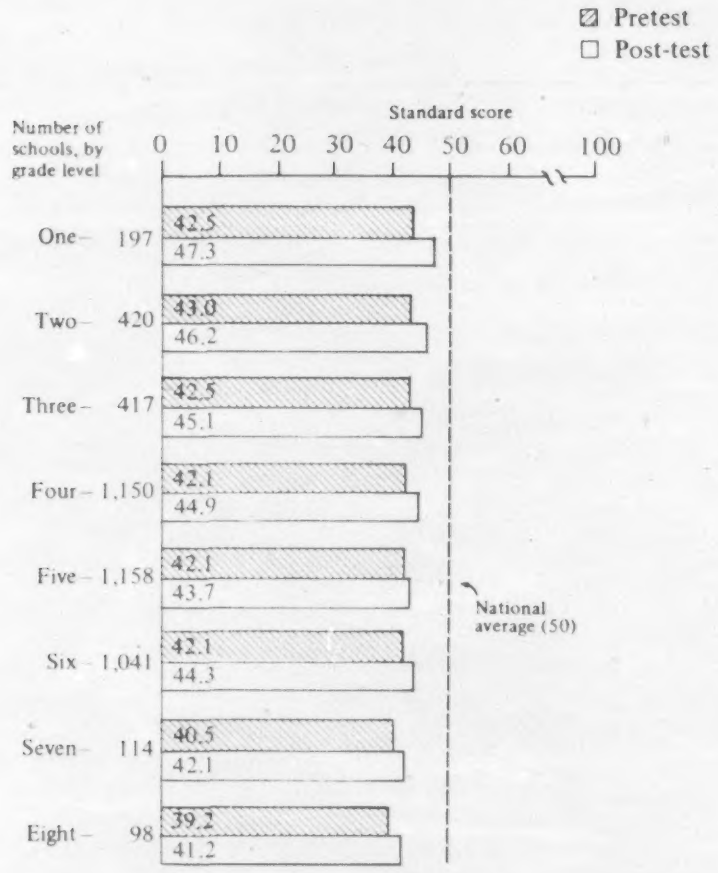

Pretest
Post-test
Number of schools, by grade level
Standard score
0 10 20 30 40 50 60 100
One 102 42.7 47.4
Two 161 42.3 46.6
Three 157 41.8 46.4
Four 446 42.2 45.4
Five 435 41.9 44.4
Six 377 42.2 44.9
Seven 26 39.9 42.1
Eight 21 39.4 41.6
National average (50)
ESEA Title I Only
Number of schools, by grade level
Standard score
0 10 20 30 40 50 60 100
One 26 43.4 47.9
Two 74 42.3 46.4
Three 59 41.2 45.2
Four 141 42.2 45.0
Five 155 41.2 43.2
Six 145 42.1 44.6
Seven 38 41.1 43.4
Eight 29 40.3 42.7
National average (50)
Educationally Disadvantaged Youth Only

Fig. V-12. Pretest and post-test standard scores in reading achievement, by grade level, for schools participating in ESEA Title I and educationally disadvantaged youth funded programs, 1975-76

NOTE: School scores were weighted on the basis of the number of students tested. "Number of schools, by grade level" indicates the number of schools that reported usable achievement data for each grade level.



ESEA Title I, Educationally Disadvantaged Youth, and ESEA Title I/Educationally Disadvantaged Youth*

Fig. V-12 (continued). Pretest and post-test standard scores in reading achievement, by grade level, for schools participating in ESEA Title I and educationally disadvantaged youth funded programs, 1975-76

*A summary of all combinations of ESEA Title I and educationally disadvantaged youth funding sources

NOTE: School scores were weighted on the basis of the number of students tested. "Number of schools, by grade level" indicates the number of schools that reported usable achievement data for each grade level.

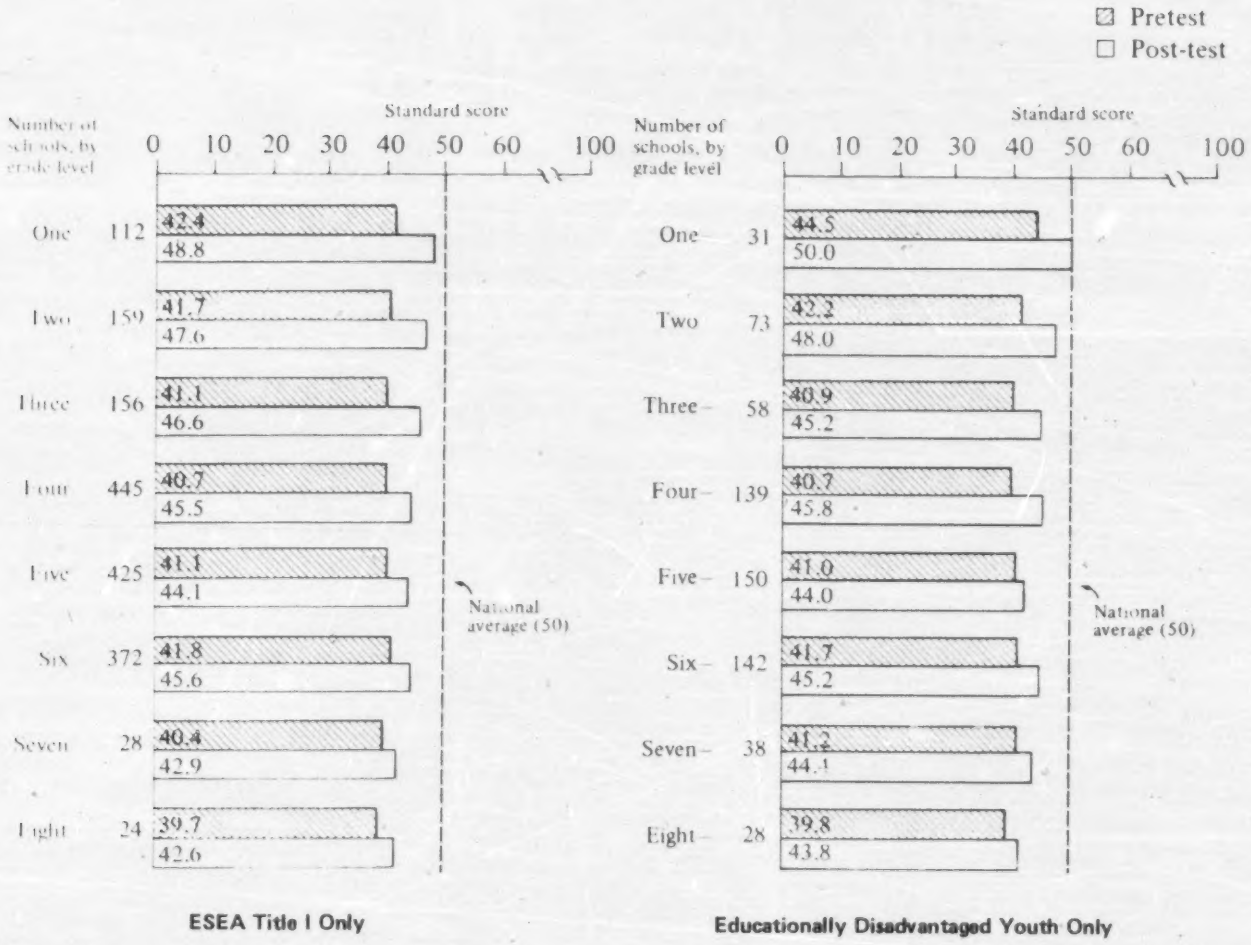
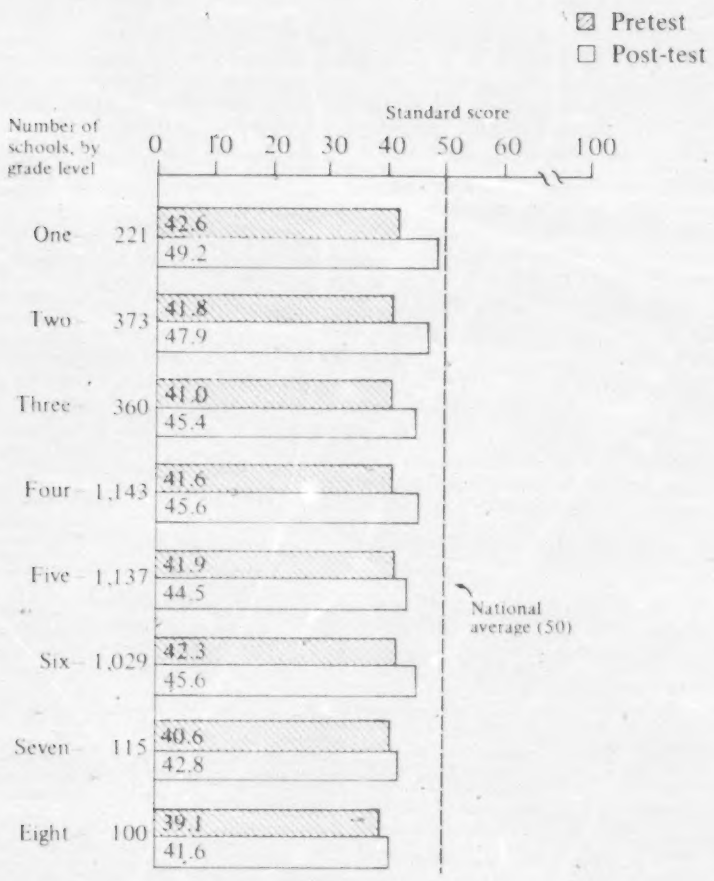

Pretest
Post-test
Number of schools, by grade level
Standard score
0 10 20 30 40 50 60 100
One 112 42.4 48.8
Two 159 41.7 47.6
Three 156 41.1 46.6
Four 445 40.7 45.5
Five 425 41.1 44.1
Six 372 41.8 45.6
Seven 28 40.4 42.9
Eight 24 39.7 42.6
National average (50)
ESEA Title I Only
Number of schools, by grade level
Standard score
0 10 20 30 40 50 60 100
One 31 44.5 50.0
Two 73 42.2 48.0
Three 58 40.9 45.2
Four 139 40.7 45.8
Five 150 41.0 44.0
Six 142 41.7 45.2
Seven 38 41.2 44.1
Eight 28 39.8 43.8
National average (50)
Educationally Disadvantaged Youth Only

Fig. V-13. Pretest and post-test standard scores in mathematics achievement, by grade level, for schools participating in ESEA Title I and educationally disadvantaged youth funded programs, 1975-76

NOTE: School scores were weighted on the basis of the number of students tested. "Number of schools, by grade level" indicates the number of schools that reported usable achievement data for each grade level.



ESEA Title I, Educationally Disadvantaged Youth, and ESEA Title I/Educationally Disadvantaged Youth*

Fig. V-13 (continued). Pretest and post-test standard scores in mathematics achievement, by grade level, for schools participating in ESEA Title I and educationally disadvantaged youth funded programs, 1975-76

*A summary of all combinations of ESEA Title I and educationally disadvantaged youth funding sources

NOTE: School scores were weighted on the basis of the number of students tested. "Number of schools, by grade level" indicates the number of schools that reported usable achievement data for each grade level.

VI. ESEA Title I Programs for Handicapped Students and Neglected and Delinquent Youth

During 1975-76 ESEA Title I funds were provided to serve 86,049 students qualifying for special compensatory education programs. These students included 62,000 children of migrant workers, 5,023 handicapped students in special schools operated by the Department of Education and in state hospitals operated by the Department of Health, 14,826 neglected and delinquent youth in local institutions, 3,886 delinquents in institutions operated by the California Youth Authority, and 314 felons in institutions operated by the California Department of Corrections. A separate evaluation report on migrant education will include information regarding services to migrant students. The numbers of participants, by age and grade span, excluding migrant students, are presented in Table VI-1.

Programs for Handicapped Students

This section contains information about ESEA Title I services that were provided in state special schools, in state and local health treatment pro-

TABLE VI-1

Number of Handicapped Students and Neglected and Delinquent Youth Participating in Programs Funded by ESEA Title I, 1975-76

Agency or facility	Approximate grade level and age of students					Total
	Preschool and kindergarten 2–5 yrs.	Elementary school 6–11 yrs.	Junior high school 12–14 yrs.	High school 15–18 yrs.	Adult 19–21 yrs.	
State Department of Education						
Neurologically handicapped		48	38	13	1	100
Blind	5	47	29	31	9	121
Deaf	2	251	218	433	36	940
State Department of Health						
Developmentally disabled	173	364	430	825	616	2,408
Mentally disabled	3	39	152	964	149	1,307
UCLA						
Neuropsychiatric Institute	37	53	31	26		147
Local educational agencies						
Neglected and delinquent	16	1,876	4,270	8,610	54	14,826
California Youth Authority			55	2,658	1,173	3,886
State Department of Corrections				35	279	314
Totals	236	2,678	5,223	13,595	2,317	24,049

grams, and at the Neuropsychiatric Institute at the University of California, Los Angeles.

Special Schools Programs

Six special state schools administered by the Department of Education received ESEA Title I funds during 1975-76 to augment instructional programs for the neurologically handicapped, blind, and deaf. A total of 1,161 handicapped students in special schools participated in augmented instructional programs funded by ESEA Title I. Of that number 100, or 9 percent, were neurologically handicapped; 121, or 10 percent, were blind; and 940, or 81 percent, were deaf. Programs were in operation between 184 and 206 school days. Participants in the schools for neurologically handicapped students attended classes between three and nine months. Students in schools for the deaf and the blind attended classes for the full school year.

Programs at the state-supported schools served students when local educational agencies were unable to meet their specific educational needs. Services included comprehensive diagnostic evaluations and counseling services for parents and families of handicapped students. The schools also participated in cooperative training programs with the University of California and the California State University and Colleges systems in professional internships and teacher training.

Funding provided by ESEA Title I enabled the several special schools to supplement their instructional programs in reading, language, and mathematics for the identified target students. Staff training, auxiliary services, and parent participation activities were adjusted to meet the students' unique needs and circumstances. Student progress was determined through commercially available standardized tests, locally developed criterion-referenced measures, and observational techniques.

Programs Administered by the California Department of Health

ESEA Title I allocations to the California Department of Health provided for the establishment of supplementary educational components in state and local health treatment programs. A total of 3,715 handicapped students participated in these activities. Of the student participants 2,408, or 64.8 percent, were developmentally disabled, those whose special needs resulted from such functional impairments as emotional stress, psychosis, or drug abuse; and 1,307, or 35.2 percent, were mentally disabled. Compounding these functional limitations for many students were secondary handicaps affecting vision, hearing, ambulation, and metabolism. Because of the severe nature of their emotional disorders, the students' learning difficulties centered around reading and listening, comprehension of words and symbols, and writing and speaking.

The Department of Health's programs were operated in 11 state mental health facilities located throughout the state. They operated between 200 and 365 days, with an average period of attendance of nine to 12 months for the developmentally disabled and five to eight months for the mentally disabled.

The Department of Education provided support in the form of general supervision, coordination, monitoring, and consulting services; while coordinators at local facilities provided program development, implementation, and evaluation services.

The goal of the programs was to raise the participants to a level of independence. All ESEA Title I programs administered by the Department of Health emphasized language development as the primary component, with activities in staff development and intergroup relations as support components; in a few facilities participant abilities permitted the use of mathematics as a component. Program effectiveness was measured using either rate of change per unit time in attendance or criterion standards for preestablished locally developed objectives. Significant improvement was made in all components. The California Department of Health publication *Learn, Compensatory Education Report, 1975-76* contains greater detail of these programs and their results.

UCLA Neuropsychiatric Institute Program

The Neuropsychiatric Institute at the University of California, Los Angeles, received ESEA Title I monies for students with severe handicaps. During 1975-76 a total of 147 special needs students received augmented instructional services in this multidisciplinary hospital setting. All students were admitted to the institute on the basis of medical referrals and accompanying problems of personal adjustment. The program was designed to meet the unique needs of the students in terms of both their emotional needs and their academic abilities.

Programs for Neglected and Delinquent Youth

ESEA Title I programs served identified neglected and/or delinquent students in a variety of special institutions. The programs included those administered by local educational agencies,

the California Youth Authority, and the Department of Corrections. While complying with conditions necessarily imposed by the institutions, each agency or institution was required to develop a comprehensive educational plan for its use of ESEA Title I funds; this plan included both instructional and instructional-support services for the students served.

Local Educational Agency Programs

In the 1975-76 school year, 14,826 ESEA Title I students were served in 154 programs for the neglected and delinquent administered at the school district or county levels. The number of students, by grade span and type of institution, is presented in Table VI-2.

The average length of participation for neglected and delinquent students varied from less than one month to more than 19 months, with 73 percent enrolled in the program for less than six months.

The primary objectives of most programs for neglected and delinquent youth were to raise academic achievement and to promote attitudinal changes toward themselves, their peers, and the larger society. The most frequently stated objectives included improving basic study skills, providing successful experiences, developing a more positive attitude, and reducing the recurrence and severity of disciplinary problems. To achieve program objectives, staffs in the majority of institutions concentrated on counseling and on a diagnostic/prescriptive instructional approach related to individual student needs.

Since the attainment of objectives was dependent on informed program personnel, most facilities developed active inservice training activities for their professional and paraprofessional staff. These activities were designed to complement the intent of the programs by emphasizing instructional diagnostic and prescriptive methods, use of new techniques and materials, problems of neglected and delinquent youth, and ways of providing a more effective transition for the student returning to regular school. These areas were addressed in workshops, orientation sessions, visits to other programs, conferences, demonstrations, and work with support service personnel. Regularly scheduled meetings for on-site staff were reported in a majority of the programs.

Improved student performance in instructional areas was generally reported, although the interval between pretesting and post-testing was frequently too short, and the numbers of students at particular grade levels were too small to allow any but the most tentative conclusions. Student results other than academic gains were reported in many

TABLE VI-2

Neglected and Delinquent Students in Local Educational Agency Programs Served by ESEA Title I, 1975-76

Type of program	Number of students served, by grade level and age of students					Total
	Preschool and kindergarten-2–5 years	Elementary 6–11 years	Junior high school 12–14 years	High school 15–18 years	Adult 19–21 years	
Delinquents in court schools		113	1,664	4,500	47	6,324
Delinquents not in court schools		61	506	1,322		1,889
Programs serving both neglected and delinquent	4	343	382	658		1,387
Programs serving only neglected	6	768	959	1,160	7	2,900
Tutorial*	6	591	759	970		2,326
Total	16	1,876	4,270	8,610	54	14,826

*Tutorial assistance for both neglected and delinquent students in addition to their regular school program

instances and included increased ability to communicate with staff and peers, increased overall motivation, and application of basic skills to areas other than reading and math. Also mentioned were reduced referrals to the courts and less need for administrative discipline. For older students more interest in vocational options was cited as a result of career programs.

Programs Administered by the California Youth Authority and the California Department of Corrections

ESEA Title I funds are allocated each year for qualifying students consigned to the California Youth Authority (CYA) from both juvenile and criminal courts and for those committed to the Department of Corrections from criminal courts.

All students within these institutions are eligible for service, but because of financial constraints, only those persons identified as most in need of remedial instruction in reading and mathematics are selected for participation in the program. Generally, students are between sixteen and twenty years of age and have shown behavior that frequently includes a history of poor school experience. Many of the CYA participants have come to be regarded as high school dropouts.

During 1975-76, ESEA Title I programs served 3,886 students in 12 institutions operated by the California Youth Authority and students in three institutions operated by the California Department of Corrections.

The emphasis in ESEA Title I programs in CYA institutions was upon diagnostic/prescriptive instruction in reading, language, and mathematics. Instructional methods included small group instruction; use of commercially developed media materials, and individual tutoring. Four schools used the individualized manpower training system approach to academic skill development. Other institutions implemented locally developed systems designed to meet the needs of the students and the requirements of their respective facilities. Use of teaching assistants and/or student aides was reported as an integral part of each ESEA Title I program.

Schools reported that students in CYA institutions demonstrated reduced frustration and better attitudes toward school as a result of more systematized diagnostic/prescriptive instruction. Schools that placed heavy emphasis on programmed learning reported that students showed an increase in autonomous learning, better work habits, and better classroom conduct. Most of the schools developed diverse programs to meet the needs of students at different remedial levels.

In several CYA programs increased participation on the part of the total ESEA Title I staff in planning the total program was reported. This led to better cooperation among staff and better services to students.

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